BRITISH PLANTS

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A

HANDBOOK

OF

BRITISH PLANTS,

DESIGNED ESPECIALLY FOR

SCHOOLS, SCIENCE CLASSES AND EXCURSIONISTS,

BY

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LONDON:
LONGMAN, GREEN, & CO., PATERNOSTER ROW.
CHELTENHAM:
NORMAN AND SONS, CLARENCE STREET.

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PREFACE.

THE following pages have been drawn up with the view to supply the want of a brief, simple, and cheap introduction to the study of British Plants, especially for the use of classes in Schools, and for the Science-classes established in various parts of the kingdom under the Department of Science and Art. It is in no wise intended to compete with the larger Floras of Babington, Hooker, and Bentham, but rather to serve as a first book for beginners, and as an introduction to those works; for after the student has gained some facility in the examination and recognition of British Plants by this manual, the author can render him no better service than to urge the careful study of plants by one of those works, especially Mr. Babington's, which for minute accuracy, definiteness of description, and happy discrimination, has no equal among our text-books of Botany. In the preparation of these pages, the author has constantly compared the descriptions of all our best Floras, including Smith's, Withering's, and others, as well as the above, with various foreign Floras, and with the actual plants both in living and dried specimens: and his aim has been to seize the most prominent and recognisable characters, though often such as the strictly scientific botanist would not recognise, such as colour, height, habit, &c. For the same reason in drawing up the characters of the natural orders and genera, he has endeavoured to seize prominent characters, even though, while they were true of all the British species, they might not apply accurately to foreign ones. As this book is simply intended to enable the beginner to find the name of the plants he meets with in his walks, many species are omitted, which though mentioned in our leading Floras, have been seen by no living botanist in our country, and most of which are believed to have been first recorded by mistake. Many are included, on the other hand, which, though undoubtedly not true natives, are yet thoroughly

naturalized and established in various places, putting on all the appearance of wild plants. Such are distinguished by the mark † prefixed to the specific name.

In the genera Rosa, Rubus, Salix, and Hieracium, especially in the three last, there is great difficulty in determining the species, on acount of the exceeding variety of forms, and the way in which these shade into one another. To such an extent is this the case, that the species can only be determined after long study of these particular groups, and years of practice. It would have been useless, therefore, to give detailed characters in a work of the elementary character of the present one, and the author has therefore in each case followed some one good authority in giving an outline of the most prominent forms, and the student who wishes further to investigate these most difficult tribes, is recommended to study them with the aid of the last edition of Babington's Manual.

In order to economise space as much as possible, several contractions have been used, of which an explanation is given at pages 10, 11. In the definitions of the species, the essential characters are first given, then the duration of the plant, next the time of flowering, then the habitat, or kind of soil, situation, &c., in which it is generally found, and finally the colour of the flower.

In conclusion, although the author has endeavoured by repeated revision and comparison with authentic specimens to guard against errors and omissions, he cannot entertain the hope that he has wholly succeeded. He would, therefore, be most thankful for the communication of any correction, however small, in order that, if his work should be received with sufficient favour to require a second edition, all such imperfections may be removed as far as possible.

Cheltenham, May, 1865.

ADDENDA.

Please to add the following with the pen in their proper place at the bottom of p. 61.

449*. **Lil'ium.** Pet. 6, reflexed at point; L. many, whorled or scattered.

449**. **Maian'themum.** Pet. 4; L. 2, on the stem, cordate.

INTRODUCTION.

The first essential in commencing the study of our wild flowers, is to obtain a clear and accurate knowledge of the principal parts of the plant. The regular and essential parts of a plant are the root, stem, leaf, and flower. The occasional parts, or appendages, are eleven, which will be enumerated presently. As no amount of description, however careful, will convey accurate ideas without actual examination, it is urgently recommended that the student should verify the various details given in this introduction upon the plants themselves, and with that view common and well-known plants are, in all cases, selected as the examples. It is only possible here, however, to give a very brief outline of the most essential points: more detailed information will be found in any of the books on Structural Botany, of which M. C. Cooke's Manual of Structural Botany, (1s.), "Vegetable Physiology," in Chambers's Educational Course, (1s. 6d.), or Smith's "Structural and Systematic Botany" in Orr's Circle of the Sciences, (2s.), may be mentioned as both good and cheap.

1. *The Root* may be fibrous as in Grasses, tuberous as in Orchis, tapering or fusiform as in Carrot, etc. It must be carefully distinguished from *under-ground stems*, such as the *tuber* of Potato, the *Rhizoma* of Ferns, or the creeping under-ground stem of Twitch, or Couch-grass, all of which are proved to be stems by bearing buds, which send up leaves or branches.

2. *The Stem* bears the leaves and flowers. Some plants have no stems, or very shortened ones, and are said to be *stemless*, as the Primrose. The stalk of the Cowslip is no stem, but only a *scape*, or flower-stalk, because it bears no leaves. In many plants the point where the leaves join the stem is conspicuously thickened, and is called a *node*, (as in wheat). The space between two nodes is an *internode*.

3. *The Leaf* consists of a leaf-stalk, or *petiole* and the blade. The petiole is sometimes absent; the leaf is then *sessile*. In some plants, as in Grasses and Sedges, the lower part of the leaf sheathes round the stem for some distance.

The angle between the leaf-stalk and the stem where these unite is called the *axil* of the leaf.

4. *The Flower.* A perfect flower consists of (1) the *calyx*, an outer whorl, or ring of leafy organs (usually green) called *sepals*; (2) a second and inner whorl of (usually) coloured leafy organs, termed *petals*, together called the *corolla*; (3) a third whorl of *stamens*, each consisting of a more or less thread-shaped stalk (the *filament*) supporting an *anther*, which when ripe, discharges a yellow dust (the *pollen*), and (4) in the centre of the flower is the *pistil*, or *pistils*, consisting of the *ovary*, or young seed-vessel at bottom, bearing at top one or more *styles*, each of which is terminated by a *stigma*, which may be knobbed, or cleft, or clubshaped, etc. In some few plants, the stigma is sessile on the top of the ovary and has no style, as in the Poppy. All these parts are well seen in the Primrose, Cowslip, Chickweed, Convolvulus, Buttercup, Charlock, Violet, Speedwell, Snapdragon, Geranium, etc. The calyx is sometimes of one piece, when it is said to be of one sepal, which is usually cleft at top (as in Primrose); it is sometimes of other colours than green, as in the Fuchsia. In some plants it falls off as soon as the blossom opens, as in the Poppy. The corolla is likewise said to be of *one petal* if it is not divided to the very base, even though it may be deeply cleft, as in the Speedwell; and in like manner a petal may be cleft almost to the base, yet be one petal. If the petals are alike and equal in size, the blossom is said to be *regular*; if unequal, or if the divisions of a 1-petalled corolla are unequal, the flower is called *irregular*. In Endogens the corolla (or the calyx and corolla together, when both appear to be present,) is often called the *perianth*. The same term is often used in the last class of Exogens. The ovary, or young seed-vessel, consists of one or more *carpels*, or small fruits: these are quite separate from one another *(distinct)* as in the Buttercup; or they are united into one fruit (*consolidated*) as in the Orange, etc. These carpels in the latter case are often called cells, and the fruit is said to be 2-, 3-, 4-, or more celled. If without partitions completely dividing it, the fruit is 1-celled, as in the Primrose. The part of the inside of the fruit to which the seeds are attached, is called the *placenta*, to which they grow by a little cord till they are ripe, as in the Pea-pod. The placenta may be either a *central* column, as in Primrose and Cowslip; or the seeds may be attached to the sides of the seed-vessel: the placenta is then said to be *parietal*. When the ovary is found inside the flower, (i.e., calyx and corolla fixed beneath the ovary) as in Primrose, the ovary is *superior*: if the flower grows on the top of the ovary, as in Gooseberry, or Carrot, the ovary is *inferior*. In the latter

case the calyx is considered as closely adherent to the ovary. When flowers contain both stamens and pistils they are called *hermaphrodite*. A flower with stamens only is called a *male* flower; one with pistils only a *female* flower. Some plants produce certain flowers which contain stamens only, and others which bear only pistils, while both kinds are found on the same plant; such are called *monœcious*. Examples—Hazel, Oak, Cucumber, etc. In other kinds the male flowers are found exclusively on one plant, while another plant exactly alike in all other respects bears nothing but female flowers; such are said to be *diœcious*. Examples—Nettle, Bryony. In some few plants hermaphrodite flowers are scattered among separate male and female flowers: such plants are termed *polygamous*.

Beside the above, which may be considered as the regular and necessary parts of a plant, there are several others which occur occasionally, and are termed appendages. These are—

(1) *Stipules*, are a pair of leafy organs situated at the base of the leaf-stalk, just where it joins the stem. They are sometimes very small, occasionally as large as the leaf itself, and vary much in size in different plants. They are well seen in the Hawthorn, Pea, Nettle, Vetch, etc. In the Rose they grow to the side of the leaf-stalk, and are said to be *adnate*. In the Elm and many other plants they are *deciduous*, (falling off early,) and are therefore only to be seen with young leaves. (Glossary, figs. 21b, and 61.)

(2) *Ochrea*,—a kind of stipule forming a thin skinny sheath round the stem, just at the springing of the leaf-stalk. Examples—Dock, Persicaria, Knot-grass.

(3) *Ligule*,—a thin skinny appendage standing *on* the leaf of most grasses, where the blade springs from the sheath.

(4) *Bract*—a leaf from the axil of which a flower-stalk springs. It is usually different in shape from the ordinary leaf. Examples—Speedwell, Sage, Marjoram. Any leafy organs, not being parts of the flower, nor true leaves, and attached to the flower-stalk, are also *bracts*. The Strawberry, Mallow, Pink, etc., have a whorl of bracts immediately outside the true calyx. By some this is described as an outer calyx.

(5) *Involucre*—the bracts (usually in a whorl, more or less complete) at the base of an umbel, (see glossary, fig. 46.) If the umbel is compound the whorl of bracts at the base of the umbellule is called *involucel*. Examples—Carrot, Fool's Parsley. The bracts enclosing the flowers of *capitate* or *composite* plants are often termed an *involucre*; and the separate bracts, *scales* or *phyllaries*.

(6) *Spathe*—a large sheathing bract more or less enclosing the whole mass of flowers. Examples—Arum ("Lords and Ladies") Onion, Lime Tree, etc.

(7) *Tendrils*—thread-like organs, either simple or branched, whose office is to coil round the stems, etc., of other plants to obtain support for the plant from which they spring. Examples—Pea, Vine, Bryony, etc., (see fig. 21a.)

(8) *Hairs* may be erect, laid flat *(adpressed)* or stellate (star-like).

(9) *Glands* are (usually) globular bodies, whose office is to secrete some peculiar substance or fluid from the juices of the plant. They may be either *stalked* (at the top of a longer or shorter hair), as on the Snapdragon, and under side of the Sweetbriar leaf; or *sessile*, as in Mint, Sage, Black Currant leaves, (the under side); or *imbedded*, as in the leaf of St. John's Wort, the rind of Oranges and Lemons, etc. They are usually minute.

(10) *Thorns* are the undeveloped, hardened, pointed ends of branches, and are continuous with the wood of the stem. Examples—Hawthorn, Sloe.

(11) *Prickles* are appendages to the bark alone, and come off with it without breaking the wood at all. They are, therefore, quite different from thorns. Examples—Rose, Bramble.

Section 2.—Classification of Plants.

All plants are arranged under one or other of three Great Classes, or Sub-kingdoms, viz.,—Exogens, Endogens, and Acrogens.

1. *Exogens.* These have always true flowers, i.e., with stamens and pistils, either together in the same flower, or stamens in one flower and pistils in another. The seeds have two seed lobes, as in the pea and bean: hence they are sometimes called *Dicotyledons.* The leaves are always more or less net-veined, having one or more main-veins, which branch and fork, so as to form a network. The edges of the leaves are very commonly notched or toothed, and the leaves are often cleft and divided. The parts of the flower (sepals, petals, and stamens,) are very commonly 5 or a multiple of 5 in number, sometimes 4, very seldom 3 or 6. Either the net-veined leaves,—their divided character or toothed edges,—or the number of parts in the flower,—or these characters combined, are the most recognisable features of an Exogen. Examples—Violet, Buttercup, Rose, Primrose.

2. *Endogens.* These have also true flowers, usually with both stamens and pistils, sometimes monœcious, very rarely dicœcious in British plants. The seed has only one seed-lobe,

hence often called *Monocotyledons*. The leaves are (with 3 exceptions) not net-veined, but with more or less parallel veins proceeding from the base of the leaf, and uniting again at its extremity, and connected by simple cross-veins, but no branching net-work. The leaves are always (in British plants), simple, never lobed, cleft, dissected or even notched or toothed at the edge. In one plant (Stratiotes) the leaf is, however, edged with prickles. The parts of the flower (sepals, petals, and stamens), are mostly 3, 6 or 9. In only 2 British plants do they *exceed* this number. A few species have 4 stamens, but none 5 or 10, The peculiar structure of the leaves, with respect to the veins, together with their character of entireness, and the arrangement of the stamens, mostly in threes, or a multiple of three, will usually readily distinguish an Endogen. Examples—Lily of the Valley, Wild Hyacinth, Rushes, Grasses, etc.

3. *Acrogens*. These have no true flowers,—no stamens or pistils, and include Ferns, Horsetails, Clubmosses, Mosses, Lichens, Seaweeds, Fungi, etc.

It will now be necessary to give the chief characters of the principal classes of these sub-kingdoms.

I. Exogens are divided into 4 Classes.

1. *Thalamiflorœ*. Flowers with both calyx and corolla. Petals distinct, more than one. Stamens always fixed to the receptacle, *beneath* the ovary, not to the calyx. Ovary always superior.

2. *Calyciflorœ*. Flowers with both calyx and corolla. Corolla usually of several petals, sometimes only of one. Stamens fixed to the calyx, which is often adherent to the ovary. Ovary often inferior.

3. *Corolliflorœ*. Flowers with both calyx and corolla. Corolla of one petal. Stamens attached to the corolla.

4. *Monochlamydeœ*. Flowers with calyx or corolla only, not both, Or we may analyze them thus:

I. Exogens.

* Fl. with only a cal. or cor.: *not both.* } Monochlamydeæ 4

** Fl. with both cal. and cor.

† Cor. of one pet. (i.e., not divided to the base.

‡ Stam. fixed to the cor. — Corolliflorœ 3

‡‡ Stam. fixed to cal. — Calyciflorœ 2

†† Cor. of more than one pet.

‡ Stam. fixed to cal.; ovary often inferior.	Calycifloræ	2
‡‡ Stam. fixed to receptacle. Ovary always superior or nearly so.	Thalamifloræ	1

II. ENDOGENS.

1. *Dictyogens.* L. net-veined.
2. *Petaloideæ.* L. parallel-veined. Perianth coloured or none.
3. *Glumaceæ.* Perianth of one or two chaff scales.

III. ACROGENS.

SECTION 3.—HOW TO EXAMINE A PLANT.

When the student has mastered the parts and appendages of plants, as detailed in the 1st Section, it will be very desirable that he should proceed to the determination of the natural orders to which the plants he meets with in his walks belong. For this purpose let the plant be compared carefully with the details given in the preceding section, and then with the Analysis of Natural Orders, p. 14. To illustrate the mode of working out these, let the student get a Buttercup, and step by step verify the following details. First: the great class or sub-kingdom to which it belongs, must be decided. It has a true flower, with sepals, petals, stamens, and pistils. It must therefore be either an Exogen or an Endogen. An Acrogen it cannot be, for they have no true flowers. Looking at the leaves, we see that they are much divided: and on examining the flowers, we see that each has 5 sepals and 5 petals. These particulars show clearly (p. 4) that it must be an Exogen. Now compare it with the analysis at p. 5. There are both sepals and petals: this compels us to reject division *; Monochlamydeæ. The next is ** "Flowers with both calyx and corolla." With this our plant agrees. The sub-section "† corolla of one petal," will not do, for our plant has 5: we must therefore pass on to "†† corolla of more than one petal" which agrees. The first sub-division, "‡ stamens fixed to the calyx, ovary often inferior," has to be rejected on examination, for we may pull off all the sepals and the stamens will remain, and most certainly the ovary is not inferior, for they are numerous and superior. We, therefore, take "‡‡ stamens fixed to the receptacle: ovary always superior," and as this agrees in every respect with the plant before us, we decide that it belongs to the class *Thalamifloræ*.

We next turn to the analysis of Natural Orders at p. 14, and referring to the Class I. Thalamifloræ, we commence a similar examination of the particulars under it. Division I. is "stamens 20 or more." We find that our plant has more than 20 stamens. This, therefore, stands good. The first Section under this head is "A. Filaments more or less united." But ours are separate to the base. We, therefore, decide that it belongs to Section B. Next we compare it "* ovary superior." This answers, as does the next sub-division, "† Stipules none." Under this head we find three orders: "‡ Carpels several, distinct; (in one genus a berry) Sepals more than 2. Leaf-stalk usually dilated at base:" and as this exactly describes our plant, we need go no further, but decide that it belongs to the order I. Ranunculaceæ. By a similar process of analytical examination and comparison with the order Ranunculaceæ in the "Genera," we ascertain that it belongs to the genus "Ranunculus:" and we may carry it out to its final step by comparing it with the species of Ranunculus in the "Species" division of the book, and thus easily find out what particular species of Ranunculus we have in hand. Two or three hints are needful in conclusion. *Never guess at a point in question:* but if the flower you are dissecting will not enable you clearly to determine the character, examine a second or third, until you are satisfied on the point under examination. If the points are so minute as to be difficult of discrimination by the unassisted eye, a pocket magnifying glass will be necessary, and should always be at hand. A sharp penknife and a needle will be all the dissecting instruments necessary. Special care should be taken to gather good specimens with several flowers, and (if possible) a specimen which has gone to seed as well. If the stamens need to be counted, always examine two or three flowers to see if there is any variation. In a few plants the true number is only found in the terminal flower. Remember also the possibility in a flower which has been opened some little while, that the anthers of some stamens may have fallen off and left only the filament. Freshly opened flowers are, therefore, always best. Let no one attempt to "commit to memory" the meaning of terms; but for every term which is not thoroughly understood, turn to the glossary. Though this will at first be troublesome, and, perhaps, be voted "slow," it will soon become less and less needful, for the meaning of most of the terms will become perfectly familiar after a little practice, and the *habit of careful and accurate examination* formed from the first, will be found of inestimable value. Slovenly and careless habits of study will hinder progress exceedingly: and those who, in the beginning, skip difficulties, or are satisfied with guesses, will always be plagued and impeded by doubts. It will be found a very useful and improving practice to gather

a plant, and then to sit down and describe it, taking the organs in the following order (when they are present) :—Root, Stem, Leaves, Stipules, Inflorescence, Bracts, Sepals, Petals, Stamens, Ovary, Style, Stigma, Fruit. For the proper terms to be used, the glossary must be referred to; and very many can get the aid of some one more experienced in the study to correct and help them in such an exercise.

Section 4.—Drying Plants and Forming a Herbarium.

A few hints on this topic are all that can be given here. Plants are best collected in a tin box or vasculum, the best shape for which is that of a sandwich-box with a handle either at the end or in the middle, or with loops for straps, and with a lid opening nearly the whole length, secured by a nut or two: and the most convenient size is about 18 to 20 inches long, 7 inches wide, and 4 deep. Plants collected in such a tin are brought home in admirable condition, even the most delicate being unwithered, and may be kept perfectly fresh for 24 hours if sprinkled slightly with water.

Drying.—One of the best papers for this purpose is the common coarse paper used by grocers for wrapping sugar, called "sugar royal." Three or four quires of this will be enough at first. A board must also be provided, clamped at both ends to prevent warping, and of the same size as the paper: and also some weights to the amount of about 1 cwt. New bricks, wrapped up separately in brown paper, and tied or sealed, are very convenient, cheap, and accessible everywhere. 16 of these weigh about 1 cwt. Now lay on the table three or four sheets of the paper. Lay out neatly on them one or two of the plants which have been gathered as naturally as possible, then gradually lay down another sheet over it, distributing the leaves with the fingers, if necessary, so as to lie as nearly as may be in their natural places. Over this lay down two or three more sheets, and then another layer of plants, and so on till the plants are all laid in. Now lay the board on the top, and on that the weights, laid so as to distribute the pressure evenly. Let the stack now remain undisturbed till next day. After about 24 hours' pressure, shift all the plants into fresh paper thoroughly dried, and remove the paper in which they have been lying, placing the board and weights on them as before. This damp paper can now be dried, which is best done in a warm (not hot) oven, such as the oven of a range at night where there has been a fire during the day. This process must be repeated day by day till the plants are thoroughly dry. The great secret of obtaining good specimens is daily changing into thoroughly dry paper and the maintenance of sufficient pressure. In this way many

plants will be quite dry in two or three days: most in four days. If the stems are thick or bushy, pare away the hinder part so as to reduce the thickness: and so also for thick heads of flowers. Very succulent plants, as the stonecrops, may be dipped for a few seconds into *boiling* water, taking care not to immerse the flowers: then slightly dried by a towel and placed in the paper.

The plants, when thoroughly dried, may be fastened down on half sheets of paper, either foolscap or folio post, or, better still, on quarter-sheets of thick "double crown" (36lbs. or 40lbs. to the ream). These quarter-sheets measure about 15 inches by 10. This last is one of the best papers which can be used. The plants are usually fastened to the paper by gum water, thin glue, or a mixture of paste and gum. If gum water be used, 2 ozs. of gum should be dissolved in 4 ozs. of water. If paste and gum, make some fresh paste, and while hot, stir into it an equal quantity of gum water, made as above. This is, perhaps, the best material. To fasten the plant down, lay it, face downwards, on a sheet of waste paper, and brush it lightly over with a thin coat of the gum, etc.; then take it up and lay it down on the paper to which it is to be fastened, dabbing it down lightly with a cloth. Lay over it a piece of clean waste paper, and place it under pressure for two or three hours in the drying paper. Finally, write at the right hand corner the name, locality, and date. Practice only can give the facility which is necessary to turn out the best specimens and the neatest herbarium, but the above directions will suffice for general rules. The genera and orders will be kept most orderly by being collected together and laid within whole sheets of coloured paper, labelled outside with the generic or ordinal name, and the whole may be best kept in a case about 9 inches deep, with both lid and front hinged like a music-case. Before finally putting away, each plant should be lightly brushed over with a solution of corrosive sublimate in spirit of wine, in the proportion of 1 drachm of corrosive sublimate to 8 ozs. of spirit of wine. This preserves from the depredations of insects. Specimens should always be kept in a dry place.

ABBREVIATIONS.

In the descriptions, the Abbreviations may stand either for the singular or plural.

Alt.	Alternate.	Memb.	Membranous.
Bar.	Barren.	0.	None.
Cal.	Calyx.	Opp	Opposite.
Caps.	Capsule.	Ov.	Ovate.
Carp.	Carpel.	Pal.	Palea.
Cor.	Corolla.	Pan	Panicle.
Cylind	Cylindrical.	Ped.	Peduncle.
F.	Female.	Pet.	Petal.
Fert.	Fertile.	Pist	Pistil.
Fil.	Filament.	Pl.	Plant.
Fl.	Flower.	Plac	Placenta.
Fld.	Flowered.	Rac.	Raceme.
Flor	Floret.	Recept.	Receptacle.
Fr.	Fruit.	Sc.	Scales.
Fruct.	Fructification.	Segm.	Segment.
Gl.	Glume.	Sep.	Sepal.
Inf.	Inferior.	Sess.	Sessile.
Inv.	Involucre.	Spikel	Spikelet.
Involucell.	Involucellum.	St.	Stem.
L.	Leaf.	Stam.	Stamen.
Lanc.	Lanceolate.	Stig	Stigma.
Leafl.	Leaflet.	Stip	Stipule.
Lig.	Ligule.	Sup	Superior.
Lts.	Leaflets.	Term.	Terminal.
M.	Male.	Umb.	Umbel.

In the Localities.

Alp.	Alpine.	Fds.	Fields.
Bks.	Banks.	Grav.	Gravelly.
Calc.	Calcareous.	Grd.	Ground.
Ch. Is.	Channel Islands.	Hea	Heaths.
Co.	Coasts.	Hed	Hedges.
Cult	Cultivated.	Ir.	Irish, Ireland.
Dit.	Ditches.	Mar	Marshes.
E.	East.	Mead.	Meadows.

Mtns.	Mountains.	San.	Sandy.
Mud.	Muddy.	Sco.	Scotland.
N.	North.	Sha.	Shady.
Past.	Pastures.	Sh.	Shores.
Pl.	Places.	Si.	Sides.
Ro. Si.	Road Sides.	W.	West.
Riv.	Rivers.	Wat.	Watery.
S.	South.	Wds.	Woods.

Duration.

A	Annual.	Sh.	Shrub.
B	Biennial.	T	Tree.
P	Perennial.		

Colour.

Crims.	Crimson.	Purp.	Purple.
Crm	Cream.	Viol.	Violet.
Gr.	Green.	Wh.	White.
Pk.	Pink.	Yell.	Yellow.

Time of Flowering.

1	January.	3	March.
2	February.	4	April. etc.

! Indicates that the plant is rare.

† Prefixed to the name of a species indicates that the plant is not truly a native, but only introduced by accident or cultivation, though apparently established.

NATURAL ORDERS OF BRITISH PLANTS.

Sub-Kingdom I.—EXOGENS.

Class I.—Thalamiflorœ.

1 Ranunculaceæ.
2 Berberidaceæ.
3 Nymphæaceæ.
4 Papaveraceæ.
5 Fumariaceæ.
6 Cruciferæ.
7 Resedaceæ.
8 Cistaceæ.
9 Violaceæ.
10 Droseraceæ.
11 Polygalaceæ.
12 Frankeniaceæ.
13 Elatinaceæ.
14 Caryophyllaceæ.
15 Linaceæ.
16 Malvaceæ.
17 Tiliaceæ.
18 Hypericaceæ.
19 Aceraceæ.
20 Geraniaceæ.
21 Balsaminaceæ.
22 Oxalidaceæ

Class II.—Calyciflorœ.

23 Celastraceæ.
24 Rhamnaceæ.
25 Leguminosæ.
26 Rosaceæ.
27 Onagraceæ.
28 Haloragiaceæ.
29 Lythraceæ.
30 Tamariscaceæ.
31 Cucurbitaceæ.
32 Portulacaceæ.
33 Illecebraceæ.
34 Grossulariaceæ.
35 Crassulaceæ.
36 Saxifragaceæ.
37 Araliaceæ.
38 Cornaceæ.
39 Loranthaceæ.
40 Umbelliferæ.
41 Campanulaceæ.

Class III.—Corolliflorœ.

42 Caprifoliaceæ.
43 Rubiaceæ.
44 Valerianaceæ.
45 Dipsacaceæ.
46 Compositæ.
47 Ericaceæ.
48 Ilicaceæ.
49 Jasminaceæ.
50 Apocynaceæ.
51 Gentianaceæ.
52 Polemoniaceæ.
53 Convolvulaceæ.
54 Solanaceæ.
55 Scrophulariaceæ.
56 Orobanchaceæ.
57 Verbenaceæ.
58 Labiatæ.
59 Boraginaceæ.
60 Lentibulariaceæ.
61 Primulaceæ.
62 Plumbaginaceæ.
63 Plantaginaceæ.

Class IV.—Monochlamydeæ.

64 AMARANTHACEÆ.
65 CHENOPODIACEÆ.
66 POLYGONACEÆ.
67 SCLERANTHACEÆ.
68 THYMELÆACEÆ.
69 SANTALACEÆ.
70 ARISTOLOCHIACEÆ.
71 EMPETRACEÆ.
72 EUPHORBIACEÆ.
73 CALLITRICHACEÆ.
74 CERATOPHYLLACEÆ.
75 URTICACEÆ.
76 ULMACEÆ.
77 ELEAGNACEÆ.
78 AMENTIFERÆ.
79 CONIFERÆ.

SUB-KINGDOM II.—ENDOGENS.

Class I.—Dictyogens.

80 TAMACEÆ.
81 TRILLIACEÆ.

Class II.—Petaloideæ.

82 ORCHIDACEÆ.
83 IRIDACEÆ.
84 AMARYLLIDACEÆ.
85 LILIACEÆ.
86 MELANTHIACEÆ.
87 HYDROCHARIDACEÆ.
88 ALISMACEÆ.
89 NAIADACEÆ.
90 ARACEÆ.
91 TYPHACEÆ.
92 LEMNACEÆ.
93 RESTIACEÆ.
94 JUNCACEÆ.

Class III.—Glumaceæ.

95 CYPERACEÆ.
96 GRAMINEÆ.

SUB-KINGDOM III.—ACROGENS.

97 EQUISETACEÆ.
98 MARSILEACEÆ.
99 LYCOPODIACEÆ.
100 FILICES

ANALYSIS OF NATURAL ORDERS.

In case any sub-division does not agree with the plant under examination, go on to the next of the same value: thus if A. does not agree pass on at once to B.; if * does not agree pass on to ** and so on.

* Some Orders are printed below in *Italics*, because most of the Plants of that Order come under another Section, and only some exceptional cases under the head so marked.

SUB-KINGDOM I.—EXOGENS.

Class I.—Thalamifloræ.

DIVISION I.—STAMENS 20 OR MORE:

A. Filaments more or less united.

* Into one set or tube; carp. separate, arranged in a ring; L. alt., stipuled. — **Malvaceæ.** 16.

** Into 3 or more sets; fr. a capsule or berry; L. generally opp.; stip. 0; fl. yellow. — **Hypericaceæ.** 18.

*** Irregularly united; pet. cleft. . . . *Resedaceæ.* 7.

B. Filaments separate to base.

* Ovary superior.

† Stip. none.

‡ Carp. several, distinct, (in one genus, a berry); sep. more than 2; Leaf-stalk usually dilated at base. — **Ranunculaceæ.** 1.

‡‡ Carp. consolidated into one fr.; pet. 4; sep. 2, deciduous. — **Papaveraceæ.** 4.

‡‡‡ Carp. consolidated; sep. 3 large and 2 smaller. — *Cistaceæ.* 8.

++ With stip.—(sometimes deciduous.)

‡ Stip. adnate. . . . . *Ranunculaceæ.* 1.

‡‡ Stip. free.

§ Inflorescence with a spathe-like-bract: Trees; stip. deciduous. — Tiliaceæ. 17.

§§ No spathe; herbs or very small shrubs; æstivation wrinkled or twisted. — Cistaceæ. 8.

** Ovary slightly inferior; pet. passing into stam. Aquatic plants, with large fl., and floating L. — Nymphæaceæ. 3.

DIVISION II.—STAMENS LESS THAN 20:

A. Fl. irregular.

a. Fl. spurred.

* Stam. 5; anth. united.

+ With stip.; ovary 1-celled. . . . Violaceæ. 9.

++ Stip. 0; ovary 5-celled. . . . . Balsaminaceæ. 21.

** Stam. 6, diadelphous, L. much divided. Fumariaceæ. 5.

b. No spur to fl.

* Stam. 8, diadelphous; stip. 0 . . . Polygalaceæ. 11.

** Stam. 8 or more, free; pet. more or less cleft; stip. 0. — Resedaceæ. 7.

*** Stam. 10; cor. papilionaceous; L. usually with stip. — *Leguminosæ.* 25

B. Fl. regular.

a. Stam. united at base.

* Carp. beaked, (united awns of carp.); L. pinnately or palmately lobed. — Geraniaceæ. 20.

** Carp. without beak; L. ternate. . . Oxalidaceæ. 22.

b. Stam. free.

* Trees or large Shrubs.

+ Fr. twin, winged; L. lobed. . . . . Aceraceæ. 19.

++ Fr. a berry; L. ciliate-serrate . . Berberidaceæ. 2.

** Herbaceous, or shrubby and prostrate.

+ Carp. distinct. . . . . *Ranunculaceæ.* 1.

†† Carp. united into 1 fr.

‡ Vernation of L. circinate; L. all radical, covered with glandular hairs. — Droseraceæ. 10.

‡‡ Vernation of L. flat.

§ Plac. parietal

1. Sep. 4; fr., a pod. . . . . *Berberidaceæ*. 2.
2. Cal. 5-cleft; style 1, 2-cleft; prostrate or spreading Shrubs, with small clustered L. — Frankeniaceæ. 12.
3. Sep. 4 or 5; Styles 4 or 5; L. entire. — Linaceæ. 15.

§§ Plac. central.

1. Stam. 6, (4 longer & 2 shorter), rarely 2 or 4; pet. 4; caps. a 2-celled pod, (in a few, 1-celled and 4-seeded) or lomentaceous; fl. cruciform. — Cruciferæ. 6.
2. Stam. usually 4, 5, 8, or 10, never 6; caps. 1-celled, always many seeded; stig. filiform. — Caryophyllaceæ. 14.
3. Stam. 6 or 8; stig. capitate; (small aquatic or marsh plants, 2 or 3 inches high, with opp. L.) — Elatinaceæ. 13.
4. Stam. 10; stig. lobed or discoid. — *Ericaceæ*. 47.

§§§ Caps. 1-seeded; L. all radical. *Plumbaginaceæ* 62.

Class II.—Calycifloræ.

Division I.—Corolla of several Petals:

A. Cor. very irregular, (papilionaceous); stam. 10. — Leguminosæ. 25.

B. Cor. regular, or nearly so.

a. With stip.

* Stip. membranaceous; stam. 3-5.; small prostrate or spreading plants. — Illecebraceæ. 33.

** Stip. minute; Shrubs with greenish fl. and berries; stam. 4 or 5. — Rhamnaceæ. 24.

*** Stip. often large, free or adnate; carp. usually several, sometimes enclosed in a fleshy cal.; stam. (mostly) numerous. — Rosaceæ. 26.

b. Stip. 0.

* Carp. several, distinct; L. fleshy. . . Crassulaceæ. 35.

** Carp. united into 1 fr.

+ Ovary 1-celled.

‡ Ovary superior.

§ Sep. 2; plants herbaceous, small; L. opp. — Portulaceæ. 32.

§§ Cal. 4- 5 cleft. A Shrub; L. minute, like scales. — Tamariscaceæ. 30.

‡‡ Ovary inferior; stam. opp. to pet.; Shrubs; L. lobed. — Grossulariaceæ 34

++ Ovary 2- or more-celled.

‡ Ovary superior.

§ Style 1.

1. Fl. axillar or spiked; pl. herbaceous. — Lythraceæ. 29.
2. Fl. in axillar cymes; Shrubs. — Celastraceæ. 23.

§§ Styles 2 or more; stam. 5, 8, or 10. — Saxifragaceæ. 36.

‡‡ Ovary inferior, or nearly so.

§ L. opp., or whorled.

1. Dicœcious; parasitic shrubs; L. opp. — Loranthaceæ. 39.
2. Monœcious or hermaphrodite; L. whorled; water plants. — Halorageaceæ. 28.
3. Hermaphrodite; fr. a drupe; fl. cymose, or umbellate; L. opp.; stam. 4. — Cornaceæ. 38.
4. Hermaphrodite; fr. dry; fl. axillar, racemose, or spiked; stam. 2, 4, or 8. — Onagraceæ. 27.

§§ L. alternate; styles 1 or 2.

1. Fr. a berry; fl. in umbellate heads; style 1; Shrubs. — Araliaceæ. 37.
2. Fr. twin; L. mostly compound; styles 2; herbaceous. — Umbelliferæ. 40.
3. Fr. linear or cylindrical: L. simple; stam. 8; style 1. — *Onagraceæ*. 27.

DIVISION II.—COROLLA OF 1 PETAL:

A. Plants with tendrils; fl. dicœcious; L. rough.	Cucurbitaceæ.	31.
B. Plants without tendrils.		
* Stam. 3; a small plant of damp places.	*Portulacaceæ.*	32.
** Stam. 5.		
† Monœcious; stam. much longer than cor.; a small plant of watery places.	*Plantaginaceæ.*	63.
†† Hermaphrodite; herbaceous; L. alternate.	Campanulaceæ.	41.
††† Hermaphrodite; shrubby; L. opp.	*Ericaceæ.*	47.
*** Stam. 8-10.		
† L. ternate or bi-ternate; fl. green.	*Araliaceæ.*	37.
†† L. simple; fl. coloured; Shrubs, (a few herbaceous) mostly small.	*Ericaceæ.*	47.

Class III.—Corolliflorœ.

DIVISION I.—Stam. free from cor.; stam. 5-10.	Ericaceæ.	47.

DIVISION II.—STAMENS FIXED TO COROLLA:

A. Cor. dry and membranous; stam. much longer than cor.	Plantaginaceæ	63.
B. Cor. coloured.		
a. Fl. capitate.		
* Anthers free; stig. simple; fl. with a calyx.	Dipsacaceæ.	45.
** Anthers free; fil. diadelphous. . .	*Leguminosæ.*	25.
*** Anthers united; stig. 2-cleft; cal. a pappus, crest, or 0; flor. tubular, or ligulate.	Compositæ.	46.
b. Fl. not capitate. Trees, or Shrubs.		
* Stam. 2.	Jasminaceæ.	49
** Stam. 4 or 5.		
† L. alternate; ovary 4-celled. . .	Ilicaceæ.	48.
†† L. opposite.	Caprifoliaceæ.	42.

c. Fr. not capitate; herbaceous.

* Ovaries 5; stam. 10. . . . . *Crassulaceæ.* 35.

** Ovaries 4.

† Stam. 2 or 4; cor. irregular, (in a few nearly regular); stem square; L. opp. — **Labiatæ.** 58.

†† Stam. 5; cor. mostly regular; L. alt., rough, bristly, or hairy; st. usually round. — **Boraginaceæ.** 59.

*** Ovaries 2, (follicles), more or less united; L. opp. — **Apocynaceæ.** 50.

**** Ovary 1, or twin.

† Cor. irregular.

‡ Stam. 2; cor. spurred. Water or bog plants. — **Lentibulariaceæ,** 60.

‡‡ Stam. 4; ovary 1-celled; plac. parietal; L. scale-like, not green. — **Orobanchaceæ.** 56.

‡‡‡ Stam. 4; ovary 4-celled. . . . *Verbenaceæ.* 57.

‡‡‡‡ Stam. 2, 4, or 5; ovary 2-celled; L. green. — **Scrophulariaceæ.** 55.

†† Cor. regular.

‡ Pistils 1 or 2.

§ L. whorled.

1. Cor. 4-fid, rarely 5-fid; stam. 4, (rarely 5); ovary inferior, 2-celled, each with 1 seed. — **Rubiaceæ.** 43.

2. Cor. 5-7-fid; stam. 5-7; ovary 1-celled, many-seeded, plac. central. — *Primulaceæ.* 61.

§§ L. alt., or 0.

1. St. climbing, or prostrate. Land plants. Seeds 1 or few. — **Convolvulaceæ.** 53.

3. St. erect, or plant aquatic.

i. Caps. 1-celled; plac. central; L. simple. — *Primulaceæ.* 61.

ii. Caps. 3-celled; plac. central; L. pinnate. — **Polemoniaceæ.** 52.

iii. Caps. 1-celled; plac. parietal; fl. fringed. Bitter bog, or water plants. — *Gentianaceæ.* 51.

iv. Fr. a berry or a 2-4-celled caps., many seeded; L. simple. — Solanaceæ. 54.

§§§ L. opp. or all radical.

1. Stam. 1 or 3; fr. 1-seeded. — Valerianaceæ. 44.

2. Stam. 4; st. square; caps. 2-4-celled. — Verbenaceæ., 57.

3. Stam. 2 or 4; st. square; ovaries 4. — *Labiatæ.* 58.

4. Stam. 5.

i. With stipules. — *Caprifoliaceæ* 42.

ii. No stip.; plac. central. — Primulaceæ. 61.

iii. No stip.; plac. parietal; or, caps. 2-celled, many seeded. Plants bitter. — Gentianaceæ. 51.

‡‡ Pist. 5; L. almost or entirely radical. — Plumbaginaceæ. 62.

Class IV.—Monochlamydeæ.

I. Seeds quite naked, protected by bracts, (scales of a cone), or enclosed in the thickened and fleshy calyx. Shrubs or Trees, with stiff linear needle-like L.; M. fl. in catkins. — Coniferæ. 79.

II. Seeds in an ovary; M. fl. in catkins. Shrubs or Trees.

A. F. fl. solitary; L. covered with silvery scales, especially beneath. — Eleagnaceæ. 77.

B. F. fl. in catkins, spikes, heads, or solitary; L. never scaly beneath. — Amentiferæ. 78.

III. Fl. never in catkins.

A. L. whorled.

* Fl. axillar; stam. 1. . . . . *Haloragiaceæ.* 28.

** Fl. axillar; stam. 12-20; fl. monœcious; L. twice or thrice forked; whorls crowded; pl. submersed. — Ceratophyllaceæ. 74.

*** Fl. whorled or terminal. . . . *Euphorbiaceæ.* 72.

B. L. not whorled, stipuled.

* Stip. adnate to petiole. . . . . *Rosaceæ.* 26.

** Stip. sheathing the st., (ochreæ); ovary 1-seeded: stig. 2 or 3. } **Polygonaceæ.** 66.

*** Stip. free.

† Shrubs or Trees.

‡ Fr. a berry; fl. appearing after the L. are expanded. } *Rhamnaceæ.* 24.

‡‡ Fr. broadly winged, 1-seeded; fl. appearing before the L. } **Ulmaceæ.** 76.

†† Herbaceous.

‡ Stip. membranaceous. . . . *Illecebraceæ.* 33.

‡‡ Stip. green, deciduous. . . **Urticaceæ.** 75.

C. L. none; stam. 1-2. . . . . *Chenopodiaceæ.*65.

D. L. not whorled, without stipules.

a. Stam. 20 or more; petioles dilated at base. } *Ranunculaceæ.* 1.

b. Stam. less than 20.

* Heath-like, procumbent Shrubs. . **Empetraceæ.** 71.

** L. opp.

† Fl. axillar, or solitary.

‡ Stam. 1; L. entire. . . . . **Callitrichaceæ.** 73.

‡‡ Stam. 4-5.

§ Ovary 1-seeded. . . . . *Chenopodiaceæ.*65.

§§ Ovary 1-celled, many seeded.

i. Stam. usually 4; L. linear. *Caryophyllaceæ.*14

ii. Stam. 5; perianth coloured. } *Primulaceæ.* 61.

§§§ Ovary 4-celled; cal. 4-cleft. *Onagraceæ.* 27.

‡‡‡ Stam. 6. . . . . *Lythraceæ.* 29.

‡‡‡‡ Stam. 10. . . . . *Caryophyllaceæ.*14

†† Fl. mostly clustered in lateral or terminal spikes, corymbs, or clusters.

‡ Trees or Shrubs.

§ L. pinnate; fl. appearing before the L. } *Jasminaceæ.* 49.

§§ L. simple, evergreen . . *Euphorbiaceæ.* 72.

‡‡ Herbaceous.

§ Ovary included in the hardened tube of cal. Small spreading or prostrate plants with linear L. — **Scleranthaceæ.** 67.

§§ Caps. 1-celled, many-seeded; fl. yellowish green. — *Saxifragaceæ.* 36.

§§§ Fr. a 1-seeded achene . *Chenopodiaceæ.*65.

§§§§ Caps. 2-3-celled, each cell 1-seeded. — *Euphorbiaceæ.* 72.

§§§§§ Caps.6-celled; fl. 1,large *Aristolochiaceæ.*70.

*** L. alternate.

† Fr. 1-seeded.

‡ Stig. 1.

§ Shrubby, erect; ovary superior; flowering early. — **Thymelæaceæ.** 68.

§§ Herbaceous, procumbent or spreading; ovary inferior; L. linear. — **Santalaceæ.** 69.

‡‡ Stigmas 2 or 3.

§ Fl. with 3 bracts; stam. fixed beneath ovary. — **Amaranthaceæ.** 64.

§§ No bracts; stam. adhering to base of perianth. — **Chenopodiaceæ.** 65.

†† Fr. with more than one seed.

§ Ovary 1-celled; fl. yellowish green; stam. 8-10. — *Saxifragaceæ.* 36.

§§ Ovary twin, inferior; stig. 2; stam. usually 5; fl. in umbels or close heads. — *Umbelliferæ.* 40.

§§§ Ovary stalked, 3-celled, each cell 1-seeded; juice milky. — **Euphorbiaceæ.** 72.

§§§§ Ovary 6-celled, inferior; stig. 6-lobed. — **Aristolochiaceæ.** 70.

Sub-Kingdom II.—ENDOGENS.

Class I.—Dictyogens.

* Diœcious, climbing; fl. in racemes; L. alternate. — **Tamaceæ.** 80

** Hermaphrodite, erect; fl. solitary; L. whorled. — **Trilliaceæ.** 81.

Class II.—Petaloideæ.

Division I.—With a Perianth.

A. Ovary inferior.

* Fl. irregular; stam. growing on pistil: not bearing true anthers, but pollen-masses. — **Orchidaceæ.** 82.

** Fl. regular, or nearly so.

† Fl. diœcious (usually with cal. and cor.) Water plants. — **Hydrocharidaceæ** 87

†† Fl. hermaphrodite, perianth in 2 whorls: outer large, reflexed, inner smaller, erect. — *Iridaceæ.* 83.

††† Fl. with a single perianth; hermaphrodite.

‡ Stam. 3; anthers facing outward. — **Iridaceæ.** 83.

‡‡ Stam. 6, anthers facing inwards; fl. from a spathe. — **Amaryllidaceæ.** 84.

B. Ovary superior.

* Carpels partly or quite distinct: water plants, but not submerged. — **Alismaceæ.** 88.

** Carpels consolidated.

† Pistils 1 or 3.

‡ Fl. hermaphrodite.

§ Perianth petaloid.

i. Anthers facing inwards; pist. 1. — Liliaceæ. 85.

ii. Anthers facing outwards, pist. 3. — Melanthiaceæ. 86.

§§ Perianth regular, of 6 dry chaff-like sepals; stam. 6, (rarely 3.) — Juncaceæ. 94.

‡‡ Fl. monœcious; stam. ♂ . . — Restiaceæ. 93.

†† Pist. 4; stam. 4; submersed or water plants. — Naiadaceæ. 89.

DIVISION II.—PERIANTH 0.

* Fl. on a spadix.

† Fl. with copious down and no spathe; spike close, cylindrical. Water plants, not submersed. — Typhaceæ. 91.

†† Fl. with no down, and a spathe or long leaf-like bract. — Araceæ. 90.

††† Fl. in a sheath at the base of a linear L. Submersed sea plants. — *Naiadaceæ*. 89.

** Spadix 0.

† Fl. in globular heads. . . . . *Typhaceæ*. 91.

†† St. 0; frond one or more small floating L.; fl. in a fissure. — Lemnaceæ. 92.

††† Plant submersed. . . . . *Naiadaceæ*. 89.

Class III.—Glumaceæ.

A. L. with entire sheaths; anthers entire at end; st. solid. — Cyperaceæ. 95.

B. L. with split sheaths; anthers notched at end; st. hollow. — Gramineæ. 96.

SUB-KINGDOM III.—ACROGENS.

A. Leafless plants, with branches in whorls; joints of st. sheathing. — Equisetaceæ. 97.

B. Leafy plants.

* Fructification on the veins underneath, or at the end of the frond.	Filices.	100.
** Fructification within involucres, situate near the root. Aquatic plants.	Marsileaceæ.	98.
*** Fructification axillar, or spiked, in the axils of the L., or the axils of bracts. Pl. branched, with small tiled entire L. Land plants.	Lycopodiaceæ.	99.

The Characeæ, Mosses, Hepaticæ, Lichens, Algæ, and Fungi are not included in this work.

GENERA.

SUB-KINGDOM I.—EXOGENS.

Class I.—Thalamiflorœ.

In some few cases one or two species of a genus are exceptional in character, and require to be arranged under a different section of the order from the rest of the genus; in such cases the genus is printed in italics, and its number in brackets refers to its proper place.

ORDER 1.—RANUNCULACEÆ.

* *Anthers facing outwards.*

† CLEMATIDEÆ. *Carp.* 1-*seeded, with a feathery awn; Æstivation valvate; L. opp.; Pl. climbing.*

1. **Cle'matis.** Sep. 4, white; pet. 0. A Shrub. *Traveller's Joy.*

†† ANEMONEÆ. *Carp.* 1-*seeded, with or without awns; Æstivation imbricate; pet. without a nectariferous pore at base; Pl. never climbing.*

2. **Anemo'ne.** Sep. 0; pet. 5-9; scape with an inv. of 3 L., more or less distant from fl.; carp. sometimes awned; fl. large. *Anemone.*
3. **Thalic'trum.** Sep. 4. or 5.; pet. 0; inv. 0; fl. small. *Meadow Rue.*
4. **Ado'nis.** Sep. 5; pet. 5-10; fl. scarlet. *Pheasant's eye.*

††† RANUNCULEÆ. *Carp.* 1-*seeded; awns* 0; *Æstivation imbricate; pet. with a nectariferous pore at base.*

5. **Myosu'rus.** Sep. 5; pet. 5, with a tubular claw; stam. 5; recept. long, narrow; L. linear. *Mousetail.*
6. **Ranun'culus.** Sep. 5, rarely 3; pet. 5, rarely more; carp. in globose or elliptical heads. *Crowfoot.*

†††† HELLEBOREÆ. *Fr. many-seeded; sep. usually coloured; pet. small or* 0.

‡ *Sep.* 5; *pet.* 0.

7. **Cal'tha.** L. not compound; fl. yell. *Marsh Marygold.*

‡‡ *Fl. complete, regular; L. compound or deeply cleft.*

8. **Trol'lius.** Sep. 10-15, yell.; pet. 5 or more, linear, flat. *Globe flower.*
9 **Eran'this.** Sep. 5-8, yellow; pet. tubular; follicles stalked. *Winter Aconite.*
10. **Helleb'orus.** Sep. 5, persistent, gr.; pet. tubular; follicles sessile. *Hellebore.*
11. **Aquile'gia.** Sep. 5, petaloid, deciduous; pet. 5, funnel-shaped, with long horned spurs; fl. few, drooping. *Columbine.*

‡‡‡ *Fl. complete, irregular; L. compound or deeply cleft.*

12. **Delphin'ium.** Upper sep. spurred; pet. 4, united, 2 upper ones with appendage, 1 appendage within the spur. *Larkspur.*
13. **Aconi'tum.** Sep. 5, petaloid, upper helmet-shaped; 2 upper pet. tubular, under the hooded sep. *Monkshood.*

** *Anthers facing inwards.*

14. **Actæ'a.** Sep. 4; pet. 4, irregular; fr. a berry; fl. small. *Baneberry.*
15. **Pœo'nia.** Sep. 5; pet. 5-10, regular; fr. 2-5 follicles; fl. large. *Pœony.*

ORDER 2.—BERBERIDACEÆ.

16. **Epime'dium.** Sep. 4; pet. 4; stam. 4. Herbaceous. *Barren-wort.*
17. **Ber'beris.** Sep. 6; pet. 6; stam. 6. A Shrub. L. simple. *Barberry.*

ORDER 3.—NYMPHÆACEÆ.

18. **Nymphæ'a.** Sep. 4; pet. many, large; fl. white. *Water Lily.*
19. **Nu'phar.** Sep. 5; pet. many, small; fl. yell. *Yellow Water Lily.*

ORDER 4.—PAPAVERACEÆ.

* *Fr. globose, urn-shaped, or oblong. Sap milky.*

20. **Papa'ver.** Stig. 4- 20-rayed, sessile; fl. wh. or red. *Poppy.*

21. **Meconop'sis.** Stig. 5-6-rayed. on a short style; fl. yell. *Welch Poppy.*

** *Fr. long, linear; stig. 2-4-lobed. Sap yell.*

† *Seeds not crested.*

22. **Rœme'ria.** Pod 3-valved; fl. violet. *Rœmeria.*
23. **Glau'cium.** Pod 2-valved; fl. yellow. *Horn Poppy.*

†† *Seeds crested.*

24. **Chelido'nium.** Stig. 2; pod 2-valved; L. thin. *Great Celandine.*

Order 5.—FUMARIACEÆ.

25. **Fuma'ria.** Fr. roundish, 1-seeded. *Fumitory.*
26. **Coryd'alis.** Pod elongated, many-seeded. *Corydalis.*

Order 6.—CRUCIFERÆ.

* Siliculosa. *Pod short, usually not much longer than the breadth.*

† *Pod* 1- (*rarely* 2-) *seeded, without a vertical septum.*

27. **Cram'be.** Pod globose, 1-seeded; fl. wh.; L. large, fleshy. *Sea Kale.*
28. **Caki'le.** Pod angular, 2-jointed, each joint 1-seeded, (lower occasionally barren); fl. pink; L. fleshy. *Sea Rocket.*
29. **Isa'tis.** Pod 1-seeded, compressed, valves keeled; fl. yell. Plant tall. *Woad.*

†† *Pod divided by a vertical septum into* 2 *cells, each cell* 1- *or more seeded.*

‡ *Pods ov. or globose, very convex.*

30. **Cameli'na.** Pod obovate, many-seeded; fl. yell. *Gold of Pleasure.*
31. **Cochlea'ria.** Pod many-seeded, keeled; style very short; fl. wh. *Scurvy Grass.*
32. **Armora'cia.** Pod globose, many-seeded, not keeled; fl. wh. *Horseradish.*
Nasturtium (58) pod ov. or elliptic; fl. yell.

‡‡ *Pods laterally compressed.*

§ *Cells each* 1-*seeded.*

33. **Coro'nopus.** Pod wrinkled or warted. Pl. prostrate. *Swine's Cress.*
34. **Lepid'ium.** Pet. equal; pod notched or entire; valves keeled. Pl. erect. *Pepperwort.*
35. **Ibe'ris.** Pet. unequal; pod notched; valves winged. *Candytuft.*

§§ *Cells each 2-seeded.*

36. **Teesda'lia.** Pod roundish, notched; fil., with a small sc. at the base of each; L. radical. *Teesdalia.*
37. **Hutchin'sia.** Pod elliptical, entire; fil. without sc. *Hutchinsia.*

§§§ *Cells each many-seeded.*

38. **Subula'ria.** Pod oval or oblong; L. subulate. *Awlwort.*
39. **Thlas'pi.** Pod circular or obovate, notched, winged. *Penny Cress.*
40. **Capsel'la.** Pod triangular, keeled, not winged. *Shepherd's Purse.*

‡‡‡ *Pods dorsally compressed.*

41. **Kon'iga.** Seeds 1-2 in each cell; fil. not toothed; hairs of L. forked; pet. wh.; st. rather woody. *Sweet Alyssum.*
42. **Alys'sum.** Seeds 2-4 in each cell; fil. toothed at base; hairs of L. stellate; pet. pale yell. *Alyssum.*
43. **Dra'ba.** Seeds many in each cell; fil. entire. *Whitlow Grass.*

** SILIQUOSA *Pod long, many times longer than broad.*

† *Pod lomentaceous.*

44. **Raph'anus.** L. rough, not fleshy. *Radish.*
Cakile (28) L. smooth, fleshy; fl. pink. *Sea Rocket.*

†† *Pod continuous, with a longitudinal septum: seeds in a single row.*

‡ *Sep.* 4, 2 *of them often prominently gibbous at base.*

§ *Fl. yell. or wh.; L. entire or nearly so.*

45. **Ery'simum.** Stig. nearly simple; pod 4-angled. *Treacle Mustard.*
46. **Cheiran'thus.** Stig. 2-lobed, lobes spreading; pod compressed, 2-edged. *Wallflower.*

§§ *Fl. varying from pale lilac to purple.*

47. **Hes'peris.** Stig. 2-lobed, lobes erect; hairs of L. simple. *Dame's Violet.*
48. **Matthi'ola.** Stig. 2-lobed, lobes erect; hairs of L. forked or stellate. *Stock.*
49. **Malcol'mia.** Stig. conical; pod woolly. *Sea Stock.*

‡‡ *Sep. all alike at base, or nearly so.*

§ *Style growing, after the fall of pet., into a stout conical beak.*

50. **Sina'pis.** Sep. spreading; valves of pod 3-5-nerved. *Charlock.*
51. **Bras'sica.** Sep. erect; valves of pod 1-nerved. *Cabbage.*

§§ *Pod terete, not beaked,—in one species* 4*-angled.*

52. **Sisym'brium.** Pod narrow, seeds not striated; L. divided, (in one species entire.) *Rocket.*
53. **Allia'ria.** Seeds striated. Pl. smelling of Garlic. *Hedge Garlic.*
Nasturtium. (52). Pod short, elliptic, fl. yell.

§§§ *Pods compressed,* 2*-edged.*

54. **Ar'abis.** Pod nerved, longer than its pedicel; L. entire, (in one species pinnatifid); fl. wh. or pale yellow. *Wall Cress.*
55. **Cardami'ne.** Pod nerveless, much longer than its pedicel. L. pinnate; fl. wh. or purplish. *Ladies Smock.*
56. **Denta'ria.** Pod not longer than its pedicel; lower L. pinnate, with bulbs in their axils; fl. purp. *Tooth Cress.*

§§§§ *Pod* 4*-angled.*

57. **Barbare'a.** Stig. entire: L. lyrate or pinnatifid. *Winter Cress.*
Sisym'brium. (52). L. entire, mostly rad.; fl. wh.
Sina'pis; (50). Upper L. linear-lanc., lower rough: fl. yell.

††† *Seeds regularly* 2*-rowed or nearly so.*

58. **Nastur'tium.** Sep. lax.; pod terete, ribless, with no beak, or very slight one; L. divided. *Water Cress.*
59. **Diplotax'is.** Sep. spreading; pod 1-nerved, strongly beaked; L. divided. *Sand Mustard.*
60. **Turri'tis.** Sep. erect; pod not beaked; L. entire. *Tower Mustard.*

Order 7.—RESEDACEÆ.

61. **Rese'da.** Ovary 3-4-lobed. *Mignionette. Weld.*

Order 8.—CISTACEÆ.

62. **Helian'themum.** Sep. 5, 3 inner larger, 2 outer smaller. *Rockrose.*

Order 9.—VIOLACEÆ.

63. **Vi'ola.** Sep. 5; pet. 5, one spurred. *Violet.*

Order 10.—DROSERACEÆ.

64. **Dro'sera.** Sep. 5; pet. 5. *Sundew.*

Order 11.—POLYGALACEÆ.

65. Polyga'la. Sep. 5, 2 larger coloured, 3 outer small; fl. in racemes. *Milkwort.*

Order 12.—FRANKENIACEÆ.

66. Franke'nia. Pet. 5, clawed, crowned, small. *Sea Heath.*

Order 13.—ELATINACEÆ.

67. Ela'tine. Cal. 3-4-fid; pet. 3-4; styles 3-4. *Water Wort.*

Order 14.—CARYOPHYLLACEÆ.

* Sileneæ. *Cal. of* 1 *sep., toothed; pet.* 5, *clawed.*

† *Styles* 2.

68. Dian'thus. Cal. with bracts at base; L. narrow. *Pink.*
69. Sapona'ria. Cal. without bracts at base, L. ov. *Soapwort.*

†† *Styles* 3.

70. Cucu'balus. Cal. campanulate; fl. pendulous. Fr. a berry. *Berry Chickweed.*
71. Sile'ne. Cal. tubular or inflated; caps. 3-celled below the middle. *Catchfly.*
Stellaria (79) Sep. combined at base.

††† *Styles* 5.

72. Lychnis. Caps 1 or 5-celled. *Campion.*

** Alsineæ. *Sep. distinct.*

† *Styles* 2-3. *(As the number of styles vary occasionally,* 3 *or* 4 *flowers should be examined.*

‡ *Pet. entire or* 0.

73. Honcke'neya. Stam. 10, alt. with 10 glands; styles usually 3 in the lower, 5 in the upper fl.; L. fleshy. *Sea Purslane.*
74. Cherle'ria. Pet. 0; L. linear. Moss-like, Alpine pl. *Mossy Cyphel.*
75. Mœhrin'gia. Pet. 5; L. thin, ov., 3-nerved.
76. Arena'ria. Pet. 5; caps. with 6 valves or teeth. *Sandwort.*
77. Alsi'ne. Pet. 5; caps. with 3 valves or teeth; L. subulate or linear.

‡‡ *Pet. cleft.*

78. **Holos'teum.** Stam. usually 3; pet. jagged at end. *Jagged Chickweed.*
79. **Stella'ria.** Stam. 10, (rarely 3 or 5); pet. deeply cleft. *Stitchwort.*

†† *Styles* 4-5.

‡ *Pet. entire or* 0.

80. **Sagi'na.** Sep. 4; stam. 4; pist. 4; stip. 0; caps. 4-valved. *Pearlwort.*
81. **Mœnch'ia.** Sep. 4, membranous at margin; stam. 4; caps. opening at end with 8 teeth.
82. **Sper'gula.** Sep. 5; stam. 5-10, without glands; pist. 5; L. (in some species) with membranous stip. *Spurrey.* *Honckeneya* (73) stam. 10, alt. with 10 glands; L. ov. fleshy.

‡‡ *Pet. cleft.*

83. **Mala'chium.** Caps. 5-valved, each valve with 2 teeth. *Water Starwort.*
84. **Ceras'tium.** Caps. tubular, 10-toothed. *Mouseear Chickweed.*

Order 15.—LINACEÆ.

85. **Li'num.** Sep. 5; pet. 5; stam. 5; pist. 5. *Flax.*
86. **Rad'iola.** Sep. 4; pet. 4; stam. 4; pist. 4. *Allseed.*

Order 16.—MALVACEÆ.

87. **Mal'va.** Outer cal. or inv. of 3 bracts. *Mallow.*
88. **Lavate'ra.** Outer cal. or inv. 3-lobed. Shrubby. L. velvety. *Tree Mallow.*
89. **Althæ'a.** Outer cal. or inv. 6-9-fid. *Marsh Mallow.*

Order 17.—TILIACEÆ.

90. **Til'ia.** Ovary 5-celled; fr. 1-celled; pist. 1; L. cordate. *Lime.*

Order 18.—HYPERICACEÆ.

91. **Hyper'icum.** Sep. 5; pet. 5; L. entire. *St. John's Wort.*

Order 19.—ACERACEÆ.

92. **A'cer.** Fl. polygamous; cal. 5-fid; pet. 5; stam. 8. *Maple.*

Order 20.—GERANIACEÆ.

93. **Ero'dium.** Stam. 5 fert., 5 bar.; awns of carp. bearded; L. pinnate or ov. and lobed. *Stork's bill.*
94. **Gera'nium.** Stam. 10 (in one species 5); awns of carp. not bearded; L. more or less palmately lobed. *Crane's bill.*

Order 21.—BALSAMINACEÆ.

95. **Impa'tiens.** Sep. 4, 1 hooded and spurred; pet. 2. *Balsam.*

Order 22.—OXALIDACEÆ.

96. **Ox'alis.** Caps. 5-celled. *Wood Sorrel.*

Class II.—Calyciflorœ.

Order 23.—CELASTRACEÆ.

97. **Staphyle'a.** Pet. 5; stam. 5; L. pinnate. *Bladder Nut.*
98. **Euo'nymus.** Pet. and stam. usually 4; L. simple. *Spindle Tree.*

Order 24.—RHAMNACEÆ.

99. **Rham'nus.** Cal. 4-5-fid; pet. 4-5; berry 2-4-celled. *Buckthorn.*

Order 25.—LEGUMINOSÆ.

* *Stam. monadelphous.*

† *Fl. in close heads.*

100. **Anthyl'lis.** Cal. inflated, woolly; L. pinnate. *Ladies Finger.*

†† *Fl. more or less scattered.*

‡ *Fl. purp., rose, or wh.*

101. **Ono'nis.** Cal. 5-fid; segm. narrow; standard striated. *Rest Harrow.*

‡‡ *Fl. yellow.*

102. **U'lex.** Sep. 2, with 2 minute bracts at base; shrub thorny. *Furze.*

103. **Genis'ta.** Cal. 2-lipped, upper 2-, lower 3-fid; L. simple; style subulate; stig. oblique. *Dyer's Weed.*

104. **Sarotham'nus.** Cal. 2-lipped, upper 2-, lower 3-toothed; style long; stig. capitate; L. simple or ternate; branches long, twiggy. *Broom.*

** *Stam. diadelphous.*

† *L. ternate.*

‡ *Pods short, roundish or oblong, 1-4 seeded.*

105. **Melil'otus.** Fl. in racemes. Pet. distinct, deciduous. *Melilot.*

106. **Trifo'lium.** Pod oval, shorter or scarcely longer than cal.; pet. somewhat united, persistent; fl. in heads. *Clover.* *Medica'go.* (107.) Pod reniform, longer than cal.; fl. in heads.

‡‡ *Pods linear, many-seeded.*

107. **Medica'go.** Pod curved or spirally coiled. *Medick.*

108. **Lo'tus.** Pod long, straight; keel of cor. beaked. *Bird's-foot Trefoil.*

109. **Trigonel'la.** Pod oblong; 6-8 seeded; keel of cor. obtuse. *Trigonella.*

†† *L. pinnate with an odd term. leaflet; no tendrils.*

‡ *Fl. in racemes or spikes.*

110. **Onobry'chis.** Pod 1-celled, 1-seeded, strongly wrinkled; standard lined. *Saintfoin.*

111. **Astrag'alus.** Pod imperfectly 2-celled, many-seeded; keel obtuse. *Milk Vetch.*

112. **Oxyt'ropis.** Pod imperfectly 2-celled, many-seeded; keel with an acute point. *Milk Vetch.*

‡‡ *Fl. in umbels or capitate; pods lomentaceous.*

113. **Hippocre'pis.** Pod curved, notched on one side; cal. short, bell-shaped, 5-toothed; fl. yell. *Horse-shoe Vetch.*

114. **Orni'thopus.** Pod curved; cal. elongated, tubular, 5-toothed; fl. minute, white, veined; a pinnate bract just below head of fl. *Bird's Foot.*

‡‡‡ *Ped. 1-4 fld.; pod lomentaceous.*

115. **Arthrolo'bium.** Pod curved upwards; no pinnate bract beneath fl.; cor. yell. *Yellow Bird's Foot.*

††† *L. pinnate, without an odd term. leaflet.*

‡ *L. mostly with tendrils.*

116. **Vic'ia.** Style filiform, bearded beneath stig.; tube of stam. very obliquely truncate. *Vetch.*

117. **Lath'yrus.** Style dilated upwards; downy beneath stig. tube of stam. transversely truncate. *Vetchling.*

‡‡ *L. with a herbaceous point in place of tendrils.*

118. **Or'obus.** Style linear or dilated upwards. *Bitter Vetch.*

†††† *L. simple.*

Lath'yrus. (117).

Order 26.—ROSACEÆ.

* Amygdaleæ. *Carp.* 1.; *style* 1.; *fr. a drupe.*

119. **Prunus.** Cal. deciduous, free from ovary; Stip. free. *Sloe.*

** Spireæ. *Fr. of several follicles.*

120. **Spiræ'a.** Cal. 5-fid. Stip. adnate; fl. in pan. or rac. *Meadowsweet.*

*** Sanguisorbeæ. *Carp.* 1-3, *enclosed within dry cal.-tube.*

+ *L. more or less palmately lobed or digitate.*

121. **Alchemil'la.** Pet. 0.; Cal. double, 8-fid. *Ladies' Mantle.*

++ *Leaves pinnate.*

‡ *Pet.* 0; *L. simply pinnate*; *fl. in heads.*

122. **Sanguisor'ba.** Stam. 4; Stig. capitate; fl. purp.-red. *Great Burnet.*

123. **Pote'rium.** Stam. 20-30.; Stig. tufted.; fl. monœcious. *Lesser Burnet.*

‡‡ *Pet.* 5.; *L. interruptedly pinnate.*; *fl. spiked.*

124. **Agrimo'nia.** Cal. with hooked bristles above. *Agrimony.*

**** Dryadeæ. *Cal. nearly flat, open, tube short*; *fr. of several carpels (achenes) or drupes, on a dry or fleshy recept.*

+ *Achenes tipped with a long awn when ripe.*

125. **Dry'as.** Awns straight, feathered; cal. single, 8-10-fid.; Pet. 8. *Mountain Avens.*

126. **Ge'um.** Awns jointed; Cal. double, 10-fid; Pet. 5. *Avens.*

++ *Achenes not awned*; *fr. of several drupes.*

127. **Ru'bus.** Cal. simple. *Blackberry, etc.*

+++ *Achenes small, dry*; *recept. pulpy.*

128. **Fraga'ria.** Cal. double; Herbaceous; L. ternate. *Strawberry.*

++++ *Achenes dry; recept. dry or spongy; cal. double.*

129. Co'marum. Recept. spongy; fl. purp. *Marsh Cinquefoil.*
130. Potentil'la. Recept. dry; fl. wh. or yell.; Stam. many. *Cinquefoil.*
131. Sibbal'dia. Recept. dry; stam. 5; cal. 10-fid.

***** ROSEÆ. *Cal. tube fleshy, globose or urnshaped, enclosing many hairy achenes.*

132. Ro'sa. Pet. 5; stam. many; stip. adnate. *Rose.*

****** POMEÆ. *Cal. tube thick and fleshy, forming when ripe a 1-5 celled fr.*

† *Segm. of cal. large, leafy; carp. bony.*

133. Mes'pilus. Pet. large; fl. solitary, sessile. *Medlar.*

†† *Segm. of cal. small.*

134. Cratæ'gus. Carp. bony; fl. in corymbs. *Hawthorn.*
135. Cotonea'ster. Fl. small, solitary, or 4 or 5 together.
136. Py'rus. Carp. horny or membranous, 2-seeded; fl. in corymbs or umbels. *Pear, Apple, etc.*

ORDER 27.—ONAGRACEÆ.

* *Caps. linear, 4-celled, 4-valved; stam. 8.*

137. Epilo'bium. Seeds tailed; fl. red, pink, or white. *Willow Herb.*
138. Æno'thera. Seeds not tailed; fl. yellow. *Evening Primrose.*

** *Caps. short; stam. 2 or 4.*

139. Isnar'dia. Stam. 4; pet. 0; caps. obovate, 4-celled.
140. Circæ'a. Stam. 2; pet. 2; caps. 1-2-celled. *Enchanter's Night-shade.*

ORDER 28.—HALORAGEACEÆ.

141. Hippu'ris. Pet. 0; stam. 1; stig. 1; L. simple. *Marestail.*
142. Myriophyl'lum. Sep., pet., and stig., 4; stam. 4-8; L. pectinate, submersed. *Water Millfoil.*

ORDER 29.—LYTHRACEÆ.

143. Ly'thrum. Cal. tubular; pet. 4-6; fl. red; pl. erect. *Purple Loosestrife.*

144. Pep'lis. Cal. bell-shaped; pet. 6 or 0, minute; pl. prostrate. *Water Purslane.*

ORDER 30.—TAMARISCACEÆ

145.—Tam'arix. Pet. 4-5; styles 3, feathered; fl. in dense spikes. *Tamarisk.*

ORDER 31.—CUCURBITACEÆ.

146. Bryo'nia. Cal. 5-toothed; cor. 5-fid; fr. a berry. *Bryony.*

ORDER 32.—PORTULACACEÆ.

147. Mo'ntia. Stig. 3; L. opp. *Blinks.*

ORDER 33.—ILLECEBRACEÆ.

* *Fr.* 1-*seeded; stam.* 5.

148. Corrigi'ola. Sep. 5; pet. 5, oblong; stig. 3; L. alt. *Strapwort.*

149. Hernia'ria. Sep. 5, flat; pet. 5, filiform; stig. 2; L. opp. *Rupture Wort.*

150. Ille'cebrum. Sep. 5, horned; pet. 5 or 0; stig. 2; L. opp. *Knot grass.*

** *Fr. many-seeded; stam. usually* 3.

151. Polycar'pon. Sep. 5, keeled, hooded; L. roundish or ov. *Allseed.*

2 species of Alsine (77) and Spergula (82) are sometimes referred to this order, because of their membranous stip.

ORDER 34.—GROSSULARIACEÆ.

152. Ri'bes. Cal. 5-fid., persistent; pet. 5, small. *Currant etc.*

ORDER 35.—CRASSULACEÆ.

* *Stam. as many as pet., and alt. with them.*

153. Tillæ'a. Sep., pet., stam., and ovaries 3-4. A minute pl. *Red Shanks.*

** *Stam. twice as many as the pet. and opp. to them.*

154. Cotyle'don. Cor. tubular, 5-fid.; stam. 10; carp. 5.; L. peltate. *Navel Wort.*
155. Se'dum. Pet. and carp. usually 5; stam. 10-12; each carp. with an entire sc. at base. *Stone Crop.*
156. Semperv'ivum. Pet. and carp. 6-20; stam. 12-40; each carp. with a torn sc. at base; L. fringed. *House Leek.*

Order 36.—SAXIFRAGACEÆ.

157. Saxif'raga. Cal. 5-fid.; pet. 5; stam. mostly 10; stig. 2. *Saxifrage.*
158. Chrysosple'nium. Cal. 4-fid.; pet. 0.; stam. mostly 8. *Golden Saxifrage.*
159. Parnas'sia, Cal. 5-fid.; pet. 5; stam. 5; stig. 4. 5 sc. fringed with glands alt. with stam. *Grass of Parnassus.*

Order 37.—ARALIACEÆ.

160. Hed'era. Cal. 5-toothed. Shrub; fl. many, umbellate. *Ivy.*
161. Adox'a. Cal. 3-fid. Herbaceous; fl. 5, in a term. head. *Tuberous Moschatel.*

Order 38.—CORNACEÆ.

162. Cor'nus. Pet. 4. *Cornel.*

Order 39.—LORANTHACEÆ.

163. Vis'cum. Fl. clustered; fr. a 1-seeded berry. *Mistletoe.*

Order 40.—UMBELLIFERÆ.

In this order, fully-grown fruit should be employed to ascertain the character. Young fruit will often lead to error.

A. *Fl. sessile, in dense heads, scarcely umbellate.*

164. Eryn'gium. Fr. scaly or bristly; L. lobed, thorny. *Eryngo.*
165. Sanic'ula. Fr. with hooked bristles. L. palmately lobed. *Sanicle.*

B. *Umbels simple, irregular or compound; L. simple, never pinnate, or ternate.*

166. Hydroco'tyle. Pet. entire; umb. irregular, few fld. Pl. creeping; L. orbicular. *White Rot.*

167. Bupleu'rum. Pet. entire, involute, yell.; umb. simple or compound. *Hare's Ear.*

168. Astran'tia. Pet. cloven; umb. simple, many fld.; bracts of inv. equalling umb.; L. palmately cleft.

C. *Umbels compound, rarely simple; carp. bristly or hairy; L. compound.*

Fr. with a beak.

Anthris'cus (174).

** *Fr. not beaked, hairy, not bristly.*

169. Libano'tis. Inv. many leaved, simple; Pet. equal. *Libanote.*

*** *Fr. not beaked, bristly.*

170. Cau'calis. Inv. 0, or of ov. bracts; bristles only on ribs of fr. *Bur Parsley.*

171. Dau'cus. Bracts of inv. pinnate. *Carrot.*

172. Tori'lis. Inv. of 1-5 subulate bracts, or 0; Involucell 3-8 leaved, fringed; bristles on ribs and furrows of fr. *Hedge Parsley.*

D. *Umbels compound; fr. beaked, smooth; L. compound.*

173. Scan'dix. Beak very long. *Shepherd's Needle.*

174. Anthris'cus. Beak short. *Beaked Parsley.*

E. *Umbels compound; fr. more or less laterally compressed, not winged.*

* *Cal. of 5 leafy teeth.*

175. Cicu'ta. Pet. obcordate; point inflexed. *Cowbane.*

** *Cal. small or obsolete; fl. diœcious.*

176. Tri'nia. Base of st. with fibrous sheaths; L. very compound; segm. linear. *Dwarf Burnet Saxifrage.*

*** *Cal. small or obsolete; fl. hermaphrodite.*

† *Involucellum* 0.

‡ *Fr. as broad as long.*

177. Smyr'nium. Fl. yellowish gr.; pet. lanc.; L. broad, ternately compound. *Alexanders.*

178. A'pium. Fl. wh.; pet. roundish; L. pinnate or ternate. *Celery.*

‡‡ *Fr. longer than broad.*

179. Œgopo'dium. Pet. obcordate, unequal, notched; L. ternately compound. *Gout Weed.*

180. Pimpi'nella. Pet. obcordate, nearly equal; L. pinnately compound; fr. ov. *Burnet Saxifrage.*
Carum (183.) Fr. oblong.

†† *Umbellules with involucels.*

‡ *Ridges of fr. crenate; segm. of L. not filiform.*

181. Coni'um. L. tripinnate. *Hemlock.*

‡‡ *Ridges of fr. smooth; segm. of L. filiform or linear.*

182. Bu'nium. Inflexed point of pet. broad, obtuse. *Pig Nut.*
183. Ca'rum. Inflexed point of the pet. narrow, acute. *Carraway.*
Heloscia'dium (187) submersed L. hair-like.

‡‡‡ *Ridges of fr. smooth; root L. ternately compound.*

184. Physosper'mum. Ribs of fr. indistinct or filiform. *Cornish Lovage.*

‡‡‡‡ *Ridges of fr. smooth; lower L. pinnate.*

185. Si'um. Pet. notched, with inflexed point; cal. with 5 small teeth; all leafl. ov. or lanc., sharply serrate. *Water Parsnip.*
186. Si'son. Pet. deeply notched with inflexed point; upper L. with linear segm.; st. wiry. *Stone Parsley.*
187. Heloscia'dium. Pet. entire, with a straight or incurved point; Lts. ov., or lanc., or hair-like. *Marsh Wort.*
Petroseli'num. (186). Pet. entire, with narrow incurved point; lts. of upper L. linear, of lower ov.

‡‡‡‡‡ *Ridges of fr. smooth; lower L. bi-tripinnate.*

188. Petroseli'num. Fr. ovate. *Parsley.*
189. Chærophyl'lum. Fr. oblong; carp. with 5 obtuse ridges; L. bipinnate. *Chervil.*
190. Myr'rhis. Fr. oblong, ½-inch to 1 inch long when ripe; carp. with 5 acute ridges; L. tripinnate. *Sweet Cicely.*

F. *Umbels compound: section of fr. (transverse) circular, or very nearly so.*

* *Pet. entire, with an inflexed lobe.*

† *Segm. of L. filiform.*

191. Me'um. Umb. with inv. and involucel; fl. whitish; st. with fibrous sheaths at base. *Meu.*
192. Fœnic'ulum. Inv. 0.; involucel 0.; fl. yellow. *Fennel.*

†† *Segm. of L. lanc. or strap-shaped.*

193. Sila'us. Lts. thin; umb. of about 6-8 rays. *Pepper Saxifrage.*
194. Crith'mum. Lts. fleshy; umb. of about 15-20 rays. *Samphire.*

††† *Segm. of L. ov. or rhomboidal.*

Ligus'ticum (197).

** *Pet. obcordate, notched, with an inflexed point.*

† *With inv. and involucell.*

195. Corian'drum. Fr. globose; L. pinnately compound. *Coriander.*

196. Ænan'the. Fr. ov., turbinate, or cylind.; styles long, erect; L. pinnately compound. *Water Dropwort.*

197. Ligus'ticum. Fr. elliptical; styles reflexed; L. ternately compound. *Lovage?*

†† *Inv.* 0., *umbellules with involucell.*

198. Æthu'sa.. Fr. broadly ov.; styles reflexed; bracts of involucel. long, linear, reflexed. *Fool's Parsley.*

G. *Umb. compound; fr. dorsally compressed, winged.*

* *Wing double on each side.*

199. Angel'ica. Pet. ov. or lanc., entire, incurved; umb. 20-40 rayed. Petiole much dilated at base. *Angelica.*

** *Wing single on each side*; *inv.* 0.; *involucell.* 0.

200. Pastina'ca. Fl. yell.; L. pinnate. *Parsnip.*

*** *Wing single on each side*; *umb. with inv. and involucell.*

† *Outer fl. radiant.*

201. Heracle'um. Inv. deciduous; petiole greatly dilated and sheathing at base; L. rough. *Cow Parsnep.*

202. Tordyl'ium. Margin of wings of fr. thickened and knotted. *Hartwort.*

†† *Outer fl. not radiant.*

203. Peuce'danum. L. twice to 5 times compound. *Sulphur wort.*

Order 41.—CAMPANULACEÆ.

* *Cor. irregular.*

204. Lobe'lia. Cor. 2-lipped; caps. 2-3 celled. *Lobelia.*

** *Cor. regular*; *fl. capitate or in a dense spike.*

205. Jasio'ne. Fl. heads with inv.; anth. cohering at base. *Sheep's Scabious.*

206. Phyteu'ma. Anthers free. *Rampion.*

*** *Cor. regular*; *fl. scattered or in a lax spike.*

207. Campan'ula. Cor. bell-shaped; caps. turbinate or semi-globose, opening by pores outside cal.; st. mostly erect. *Bellflower.*

208. **Wahlenber'gia.** Cor. bell-shaped, on long ped.; st. trailing. *Ivy Bellflower.*
209. **Specula'ria.** Cor. rotate; caps. long, prism-shaped. *Venus's Looking Glass.*

Class III.—Corolliflorœ.

Order 42.—CAPRIFOLIACEÆ.

* *Stig.* 3, *sessile*; *stam.* 5.

210. **Sambu'cus.** Cor. rotate; berry 3-4 seeded; L. pinnate. *Elder.*
211. **Vibur'num.** Cor. (in fertile fl.) bell or funnel-shaped.; berry 1-seeded; L. entire or lobed, not pinnate. *Guelder Rose.*

** *Style* 1.; *stig. capitate.*

212. **Lonice'ra.** Cor. tubular, irregular; stam. 5. *Honeysuckle.*
213. **Linnæ'a.** Cor. bell-shaped, drooping, regular; stam. 4.

Order 43.—RUBIACEÆ.

* *Cor. rotate.*; *fr. 2-lobed or twin.*

214. **Ru'bia.** Cor. 3-5-fid.; stam. 5.; fr. a berry. *Madder.*
215. **Ga'lium.** Cor. 4-fid.; stam. 4.; fr. dry. *Goose-grass.*

** *Cor. funnel-shaped.*

216. **Aspe'rula.** Stam. 4.; fr. twin, not crowned with cal.; fl. panicled; Inv. 0. *Woodruff.*
217. **Sherar'dia.** Stam. 4.; fr. oblong, crowned with cal.; fl. crowded, surrounded with an inv. *Field Madder.*

Order 44.—VALERIANACEÆ.

* *Stam.* 1.; *cor. with a spur.*

218. **Centran'thus.** Fr. 1-seeded, crowned with pappus. *Red Valerian.*

** *Stam.* 2-3; *no spur to cor.*

219. **Valeria'na.** Fr. 1-celled, crowned with pappus. *Valerian.*

220. Fe'dia. Fr. 3-celled (2 empty or abortive), 1-seeded, crowned with unequally toothed cal. *Corn Salad.*

Order 45.—DIPSACACEÆ.

221. Dip'sacus. Recept. with spiny sc.; cal. a margin to ovary. *Teazle.*
222. Knau'tia. Recept. hairy; heads with inv.; ovary inf., cal. double, outer of 4 small teeth, inner with radiant teeth. *Field Scabious.*
223. Scabio'sa. Recept. scaly.; heads with inv.; ovary inf.; cal. double; outer plaited, membranous, inner of 5 bristles. *Scabious.*

Order 46.—COMPOSITÆ.

Sub-order I.—CICHORACEÆ.

Flor. all ligulate and perfect.

* *Pappus* 0; *Recept. naked.*
224. Lap'sana. Inv. with sc. at base; flor. few. *Nipple Wort.*
** *Pappus a membranous margin or sc.; recept. naked.*
225. Arno'seris. Inv. double; scape thickened under fl.; fl. yell.
226. Cicho'rium. Inv. double; fl. blue. *Succory.*
*** *Pappus simple (not feathered.)*
† *Flor. few in each head.*
227. Lactu'ca. Achenes more or less beaked; inv. cylind. *Lettuce.*
†† *Flor. many in each head.*
‡ *Inv. double.*
§ *Pappus stipitate.*
228. Tarax'acum. Inv. reflexed in fr.; achenes muricated; L. all radical. *Dandelion.*
229. Bork'hausia. Inv. erect in fr.; achenes terete, ribbed; st. leafy. *Hawk's Beard.*
§§ *Pappus sessile.*
230. Cre'pis. Achenes terete or nearly so, ribbed; fl. yell.; st. branched. *Hawk's Beard.*
231. Mulge'dium. Achenes compressed; fl. blue; st. scarcely branched. *Blue Sow Thistle.*

‡‡ *Inv. imbricated; achenes not beaked.*

232. **Son'chus.** Inv. swelled at base; pappus soft, silvery; achenes compressed. *Sow Thistle.*

233. **Hiera'cium.** Inv. ov., not swelled at base; pappus rigid, brittle; achenes not compressed, somewhat angular. *Hawk Weed.*

**** *Pappus feathered.*

† *Recept. chaffy or scaly.*

234. **Hypochæ'ris.** Inv. imbricated; pappus stipitate. *Cat's Ear.*

†† *Recept. naked; pappus sessile; inv. double, outer of very small irregular sc., inner imbricated, sc. unequal.*

235. **Thrin'cia.** Achenes nearest the inv. larger, with scaly pappus; inner ones beaked, with 2 rows of pappus, outer simple, inner feathered. *Hawkbit.*

236. **Apar'gia.** Pappus of all achenes either in 2 rows (inner feathered, outer simple,) or in 1 row, feathered; achenes all alike, slightly beaked. *Hawkbit.*

††† *Recept. and pappus as last; inv. double; sc. of inner equal.*

237. **Pi'cris.** Achenes transversely furrowed. Pl. bristly. *Ox Tongue.*

†††† *Recept. naked; pappus stipitate.*

238. **Tragopo'gon.** Inv. simple. Pl. glabrous. *Goat's Beard.*

239. **Helmin'thia.** Inv. double. Pl. very bristly. *Bristly Ox Tongue.*

SUB-ORDER II.—CYNAROCEPHALÆ.

Flor. all tubular (outer (in one genus) sometimes radiant), with both stam. and pist., or the outer ones neuter; style swollen below its fork.

* *L. thorny or fringed with small prickles.*

† *Recept. chaffy or bristly.*

240. **Carli'na.** Outer sc. of inv. spiny, inner yellow, not spiny, longer than flor.; achenes silky; sc. of recept. cleft. *Carline Thistle.*

241. **Sil'ybum.** All sc. of inv. with strong thorns; recept. scaly; fil. united; L. with milky veins. *Milk Thistle.*

242. **Car'duus.** All sc. of inv. spiny; recept. bristly; fil. distinct. *Thistle.*

†† *Recept. honey-combed; inv. globose.*

243. Onopor'dum. Pappus simple; all sc. of inv. spiny. *Cotton Thistle.*

** *L. not thorny; inv. imbricate; sc. not fringed or thorny.*

† *Some or all of the sc. of inv. hooked.*

244. Arc'tium. Recept. with stiff chaff-sc. *Burdock.*

†† *Sc. of inv. not hooked; heads oblong.*

245. Saussure'a. Recept. chaffy; pappus in two rows; L. entire.

246. Serrat'ula. Recept. bristly; pappus in several rows; L. pinnatifid. *Saw Wort.*

*** *L. not thorny; inv. imbricated with fringed or thorny sc.*

247. Centaure'a. Recept. chaffy or bristly. *Knapweed.*

SUB-ORDER III.—CORYMBIFERÆ.

Flor. either all tubular, or those of the disk tubular and those of the margin ligulate. All flor. hermaphrodite, or those of the disk hermaphrodite, and those of the margin with pistils only, (in 1 genus neuter); style not swollen beneath its branches.

A. *Pappus of 2-4 stout awns, rough with prickles pointing downwards, persistent.*

248. Bi'dens. Fl. rarely radiant; discoid. *Bur-Marygold.*

B. *Pappus more or less hair-like.*

* *Flor. all tubular.*

† *Scape with soft sc., but no true L.; L. radical.*

249. Petasi'tes. Fl. in a thyrse, appearing before L. *Butter-bur.*

†† *St. leafy; L. divided.*

250. Eupato'rium. Fl. pink; heads about 5-fld. *Hemp Agrimony.*

Senecio (262) Fl. yell.; L. pinnatifid.

††† *St. leafy; L. entire.*

‡ *L. glabrous.*

251. Linosy'ris. Heads hemispherical; inv. lax. *Goldilocks.*

Aster (255) inv. oblong, imbricate; L. fleshy.

‡‡ *L. cottony on one side or both.*

252. Antenna'ria. Dœcious; sc. of inv. wh. or pinky; recept. convex; pappus of bar. fl. thickened upwards. *Everlasting.*

253. Gnapha'lium. Sc. of inv. brown (in one species yellowish wh.); heads hemispherical to oval; recept. flat. *Cudweed.*

254. **Fila'go.** Inv. conical; outer flor. intermixed with inner sc. of inv.; recept. conical. *Cudweed.*

‡‡‡ *L. roughly woolly.*

Inula (259).

** *Fl. radiate (flor. of margin ligulate).*

† *Flor. of ray blue, purplish, or reddish wh.*

255. **As'ter.** Pl. glabrous; radiate flor. ligulate. *Sea Starwort.*

256. **Eri'geron.** Pl. hairy; radiate flor. filiform. *Fleabane.*

†† *Flor. of ray yellow.*

‡ *Fl. on a scape, appearing before the L.*

257. **Tussila'go.** Fl. one, rarely more, on each scape. *Coltsfoot.*

‡‡ *Stam. leafy; inv. imbricated.*

§ *Flor. of ray few* (5-8).

258. **Solida'go.** Inv. much imbricated, oblong. *Golden Rod.*

§§ *Flor. of ray many.*

259. **I'nula.** Pappus in 1 row, pilose. *Elecampane.*

260. **Pulica'ria.** Pappus in 2 rows; outer cup-like, membranous; inner pilose. *Fleawort.*

‡‡‡ *Sc. of inv. equal, sometimes with a few small sc. at base.*

261. **Sene'cio.** Inv. with 1 row of equal sc., usually brown or black at tip, and several smaller at base. *Rag Wort.*

262. **Cinera'ria.** Inv. with 1 row of equal sc., and no small ones at base; L. entire. *Flea Wort.*

263. **Doro'nicum.** Inv. hemispherical, with 2 or 3 rows of equal sc.; L. ov. or cordate; fl. large. *Leopard's Bane.*

C. *Pappus membranous or* 0.

* *Recept. without sc.; fl. radiant.*

† *Recept. conical; pappus* 0.

264. **Matrica'ria.** Inv. flat; L. with capillary segm. *Feverfew.*

265. **Bel'lis.** Inv. hemispherical; L. not divided. *Daisy.*

†† *Recept. hemispherical or nearly flat.*

266. **Chrysan'themum.** Pappus 0.; achenes of disk nearly terete. *Ox Eye.*

267. **Pyreth'rum.** Pappus a membranous border; achenes all angular. *Feverfew.*

** *Recept. without sc. (in one species hairy); flor. all tubular.*

268. **Tanace'tum.** Inv. hemispherical; pappus a slight membranous border; L. glabrous. *Tansy.*

269. **Artemis'ia.** Inv. hemispherical, or ov.; pappus 0.; L. hoary or silky on one side or both. *Wormwood.*

*** *Recept. scaly; pappus* 0.

† *Fl. radiate.*

270. An'themis. Recept. convex; achenes terete, or nearly so; ligulate flor. oblong-linear. *Chamomile.*

271. Anacy'clus. Recept. convex; achenes compressed, winged; ligulate flor. oblong-linear.

272. Achille'a. Recept. nearly flat; ligulate flor. ov., roundish, or obcordate. *Yarrow.*

†† *Flor. all tubular.*

273. Dio'tis. Heads hemispherical; whole pl. densely cottony or woolly. *Cotton Weed.*

D. *Anomalous genus.*

274. Xan'thium. Fertile flor. without cor.; inv. of fert. flor. prickly with hooked spines, 2-fid.; pappus 0. *Bur Weed.*

ORDER 47.—ERICACEÆ.

TRIBE 1.—ARBUTEÆ.—*Fr. a berry; ovary superior. Trees or shrubs; cal. deeply,* 5-*fid.*; *cor. ov.*; *stam.* 10.

275. Ar'butus. A tree; berry 5-celled, each cell many-seeded. *Strawberry Tree.*

276. Arctostaph'ylos. Procumbent shrubs; berry 5-celled, each cell 1-seeded. *Bear-berry.*

TRIBE 2.—VACCINIEÆ.—*Fr. a berry; ovary inf.; small shrubs; stam* 8-10.

277. Vaccin'ium. Cor. ov., or bell-shaped, 4-5 fid. *Bilberry.*

278. Oxycoc'cos. Cor. deeply 4-fid.; segm. revolute; st. wiry, creeping. *Cranberry.*

TRIBE 3.—ERICEÆ.—*Fr. a dry caps., sup.; seeds neither chaffy nor winged; L. generally stiff. Shrubs.*

* *Cor. deciduous; L. mostly alt. or scattered.*

† *Cal.* 4-*fid.*; *cor.* 4-*fid.*

279. Dabe'cia. Stam. 8; fil. shorter than anther; fl. blue or purp., rarely wh. *St. Dabeoc's Heath.*
Andromeda (280). Fl. pink; L. lanc.

†† *Cal.* 5-*fid.*; *cor.* 5-*fid.*

280. Androm'eda. Stam. 10; caps. 5-celled, bursting loculicidally; fl. pink.

281. Phyllo'doce. Stam. 10; caps. 5-celled, bursting septicidally; fl. blue.

282. Aza'lea. Stam. 5; caps. 2-3 celled; st. trailing.

** *Cor. persistent after withering; L. opp. or whorled.*

283. Callu'na. Cal. double, outer gr., inner coloured, longer than cor., each of 4 sep.; cor. campanulate, 4-fid. *Ling.*

284. Eri'ca. Cal. single, of 4 sep.; cor. ov. or campanulate. *Heath.*

TRIBE 4.—PYROLEÆ.—*Fr. a caps.; cal. 5-fid.; stig. 5; seeds chaffy. Herbaceous, or slightly shrubby pl. with ov. or orbicular L.*

285. Mone'ses. Cor. 5-fid. Pl. 1-fid.; stig. large, 5-rayed. *Winter Green.*

286. Py'rola. Pet. 5; fl. racemose; stig. 5-lobed. *Winter Green.*

TRIBE 5.—MONOTROPEÆ.—*Cal. 4-5 sep.; cor. 4-5 pet. Herbaceous pl. with sc., but no true L.*

287. Monot'ropa. Pet. hooded at base; stam. 8-10; caps. 5-celled. *Bird's Nest.*

ORDER 48.—ILICACEÆ.

288. I'lex. Cal. and cor. 4-5-fid.; stig. 4. *Holly.*

ORDER 49.—JASMINACEÆ.

289. Ligus'trum. Shrub; cor. funnel-shaped; fr. a berry. *Privet.*

290. Frax'inus. Tree. Fl. appearing before *L.*; cor. 0; fr. winged. *Ash.*

ORDER 50.—APOCYNACEÆ.

291. Vin'ca. Cor. salver-shaped, 5-lobed. *Periwinkle,*

ORDER 51.—GENTIANACEÆ.

* *Cal. 8-fid.; cor. 8-fid.; L. opp.*

292. Chlo'ra. Style 1, deciduous; caps. 1-celled; L. connate. *Yellow Wort.*

** *Cor. bearded or fringed; L. alt.; stam. 5.*

293. Villar'sia. Stig 2-5-lobed; fl. yell.; L. entire, floating.

294. Menyan'thes. Stig. capitate; fl. wh.; L. ternate. *Buck-bean.*

*** *Cor. funnel or salver-shaped; L. opp.*

295. **Cicen'dia.** Cal. and cor. 4-fid.; stam. 4; pist. 1; stig. capitate.

296. **Erythræ'a.** Cal. and cor. 5-fid.; stam. 5; stig. 2; fl. pink or wh. *Centaury.*

297. **Gentia'na.** Cal. and cor. 4-5-fid.; stam. 4-5; stig. 2; fl. blue or purp. *Gentian.*

Order 52.—POLEMONIACEÆ.

298. **Polemo'nium.** Cal. 5-fid.; cor. 5-fid., regular. *Jacob's Ladder.*

Order 53.—CONVOLVULACEÆ.

* *Leaves* 0; *parasitic pl. with fl. in clustered heads.*

299. **Cus'cuta.** Cor. 4-5-fid., with sc. inside. *Dodder.*

** *St. leafy; cor. bell-shaped.*

300. **Calyste'gia.** Cal. enclosed within 2 large bracts. *Bindweed.*

301. **Convol'vulus.** Bracts distant from cal. *Bindweed.*

Order 54.—SOLANACEÆ.

* *Fr. a berry.*

302. **Sola'num.** Cor. 5-fid.; fl. in corymbs or umb.; anth. united. *Nightshade.*

303. **At'ropa.** Cor. large, bell-shaped; fl. solitary; anth. free. *Deadly Nightshade.*

** *Fr. a capsule.*

304. **Datu'ra.** Cor. tubular-funnel-shaped, plaited; caps. imperfectly 4-celled, prickly. *Thorn Apple.*

305. **Hyoscy'amus.** Cor. bell-funnel-shaped, unequally 5-lobed, with a net-work of purple veins; caps. 2-celled. *Henbane.*

Order 55.—SCROPHULARIACEÆ.

* *Stam.* 2.

306. **Veroni'ca.** Cor. rotate, unequally 4-fid ovary 2-celled. *Speedwell.*

** *Stam.* 4.

† *Cal.* 4-*toothed or* 4-*fid.*

‡ *Upper lip of cor. compressed laterally.*

307. **Rhinan'thus.** Cal. inflated; caps. obtuse, 2-celled; seeds several, winged. *Yellow Rattle.*

308. **Melampy'rum.** Cal. not inflated; caps. acuminate, 2-celled; 1 seed in each cell. *Cow Wheat.*

‡‡ *Upper lip of cor. not compressed laterally.*

309. **Bart'sia.** Upper lip of cor. entire or slightly notched.

310. **Euphra'sia.** Upper lip of cor. 2-lobed; fl. wh., streaked. *Eye Bright.*

†† *Cal. of* 5 *sep., or* 5-*fid., or* 2-3 *lobed.*

‡ *Cor. rotate, segm. unequal.*

311. **Sibthor'pia.** Sep. 5; L. orbicular; pl. creeping. *Cornish Money Wort.*

‡‡ *Cor. personate.*

312. **Lina'ria.** Cor. spurred. *Toad Flax.*

313. **Antirrhi'num.** Cor. gibbous at base, not spurred. *Snap Dragon.*

‡‡‡ *Cor. bell-shaped or tubular.*

314. **Limosel'la.** Cor. minute, with equal lobes; pl. almost stemless. *Mud Wort.*

315. **Digita'lis.** Cor. large, unequal, spotted, drooping; fl. in an erect rac. *Fox Glove.*

‡‡‡‡ *Cor. ringent.*

316. **Pedicula'ris.** Cal. inflated, specially after flowering; fl. pink or wh.; L. much divided. *Louse Wort.*

317. **Mi'mulus.** Cal. tubular, 5-angled, 5-toothed; fl. large, yell.; L. ov. *Monkey Flower.*

Euphrasia (310). Fl. small, wh., streaked.

‡‡‡‡‡ *Cor. somewhat globose.*

318. **Scrophula'ria.** Cor. with 2-lobed upper lip, often with a small sc. within; lower lip turned downwards. *Fig Wort.*

*** *Stam.* 5.

319. **Verbas'cum.** Cor. rotate; fil. (some or all) woolly. *Mullein.*

Order 56.—OROBANCHACEÆ.

320. **Oroban'che.** Cal. deeply cleft into 2, 4, or 5 pointed sep.; cor. ringent, 4-5-fid. *Broom Rape.*

321. **Lathræ'a.** Cal. with 4 broad short teeth; cor. 2-lipped; upper lip helmet-shaped. *Tooth Wort.*

ORDER 57.—VERBENACEÆ.

322. **Verbe'na.** Cal. 5-fid.; cor. 5-fid.; ovary 4-celled. *Vervein.*

ORDER 58.—LABIATÆ.

* *Stam.* 2.

323. **Ly'copus.** Cor. nearly regular; cal. 5-fid.; fl. wh. *Gypsy Horehound.*

324. **Sal'via.** Cor. 2-lipped; cal. 2-lipped; fl. blue or purplish. *Sage.*

** *Stam.* 4, *nearly equal: cor. nearly regular,* 4-*fid.*

325. **Men'tha.** Cal. 5-fid; fl. whorled. *Mint.*

*** *Stam.* 4, *diverging, nearly equal, longer than cor.; cor. somewhat* 2-*lipped.*

326. **Thy'mus.** Cal. 2-lipped, upper lip 3-toothed, lower 2-fid.; fl. whorled, or in term. heads. *Thyme.*

327. **Orig'anum.** Cal. with 5 equal teeth; fl. in spikes or heads, imbricated with purp. bracts, corymbose or panicled. *Marjoram.*

**** *Stam.* 4, *didynamous; upper lip of cor. very short or nearly wanting.*

328. **Teu'crium.** Upper lip of cor. deeply 2-fid; fl. pointing one way. *Germander.*

329. **Aj'uga.** Upper lip entire, or slightly notched; fl. in whorls. *Bugle.*

***** *Stam.* 4. *didynamous; upper lip of cor. longer than stam.*

† *Cal. with* 5 *nearly equal teeth; stam. longer than tube of cor.*

‡ *Cal.* 5-10 *ribbed; anthers sprinkled with shiny dots.*

330. **Leonu'rus.** Lower lip 3-7-lobed. *Mother Wort.*

‡‡ *Cal.* 5-*ribbed.*

331. **Galeob'dolon.** Fl. yell.; lobes of lower lip 3, equal, entire. *Weasel Snout.*

‡‡‡ *Cal.* 10-*ribbed, long and funnel-shaped.*

332. **Ballo'ta.** Whorls secund, with many filiform bracts. *Stinking Horehound.*

‡‡‡ *Cal.* 10-*ribbed, short, campanulate.*

§ *Lower lip of cor.* 2-3-*lobed, with* 1 *or* 2 *teeth on each side.*

333. La'mium. Lower lip 2-lobed; st. decumbent at base; tube of cor. swollen at throat. *Dead Nettle.*
334. Galeop'sis. Lower lip 3-lobed. *Hemp Nettle.*

§§ *Lower lip of cor.* 3-*fid without lateral teeth.*

335. Sta'chys. Lateral lobes of cor. reflexed; tube of cor. equal to cal. *Wound Wort.*
336. Beton'ica. Lower lip. of cor. nearly flat; tube of cor. longer than cal. *Betony.*

‡‡‡‡ *Cal.* 15-*ribbed.*

337. Nep'eta. Central pair of stam. longest. *Cat Mint.*

†† *Cal.* 10-*toothed; stam. shorter than tube of cor.*

338. Marru'bium. Teeth of cal. hooked; pl. cottony. *Horehound.*

††† *Cal.* 2-*lipped.*

‡ *Stam. diverging.*

339. Calamin'tha. Upper lip of cor. nearly flat; tube straight. *Calamint.*
340. Meli'ssa. Upper lip of cor. arched; tube curved. *Balm.*

‡‡ *Stam. parallel.*

§ *Cal. open in fr.*

341. Melit'tis. Cal. of 3 broad lobes; fl. large. *Bastard Balm.*

§§ *Cal. closed in fr.*

342. Prunel'la. Fil. forked; fl. in close whorled term. heads; upper lip of cal. 3-toothed, lower 2-toothed. *Self Heal.*
343. Scutella'ria. Fil. simple; fl. in distant axillar pairs; cal. of 2 entire lips. *Scull Cap.*

Order 59.—BORAGINACEÆ.

* *Tube of cor. open, not closed by sc. or valves.*

† *Stam. projecting beyond cor.*

44. E'chium. Pl. bristly; cor. irregular. *Viper's Bugloss.*
345. Merten'sia. Pl. hairless; L. fleshy, rough with dots; cor. regular, funnel-shaped. *Oyster Plant.*

†† *Stam. not projecting beyond tube of cor.*

346. Pulmona'ria. Cal. 5-toothed, not cleft to middle. *Lung Wort.*

347. Lithosper'mum. Cal. 5-fid. almost to base; nuts very hard, stony. *Gromwell.*

** *Tube of cor. more or less closed by sc., valves, or stam.*

† *Fil. forked, one branch bearing the anther.*

348. Bora'go. Cor. rotate, anth. in a cone. *Borage.*

†† *Fil. simple; tube of cor. crooked.*

349. Lycop'sis. Nuts wrinkled; pl. bristly. *Bugloss.*

††† *Fil. simple; tube of cor. straight.*

‡ *Sc. of cor. lanc.-subulate.*

350. Sym'phytum. Cor. tubular, enlarged above mid.; rac. in parallel pairs, involute in bud. *Comfrey.*

‡‡ *Sc. of cor. obtuse; cal. with 5 larger and 5 minute teeth.*

351. Asperu'go. Fl. axillar, solitary. *Mad Wort.*

‡‡‡ *Sc. of cor. obtuse; cal. regularly 5-fid.*

352. Cynoglos'sum. Nuts covered with hooked prickles. *Hound's Tongue.*

353. Anchu'sa. Nuts wrinkled; fl. in leafy rac. *Alkanet.*

354. Myoso'tis. Nuts smooth, polished; fl. in leafless rac. *Forget-me-not.*

Order 60.—LENTIBULARIACEÆ.

355. Pinguic'ula. L. all radical; cal. 5-fid, 2-lipped. *Butter Wort.*

356. Utricula'ria. L. submersed or floating, in capillary segm. with small bladders. *Bladder Wort.*

Order 61.—PRIMULACEÆ.

* *L. all submersed, pectinately-pinnate.*

357. Hotto'nia. Fl. in distant whorls on an erect scape. *Water Violet.*

** *Erect land pl.; L. undivided; stam.* 7.

358. Trienta'lis. Cal. and cor. 7-fid.; fl. 1 to 4. *Chickweed Winter Green.*

*** *Land pl.; L. undivided, opp., stalked, or whorled.*

† *Cal. campanulate, coloured; cor.* 0.

359. Glaux. Fl. axillar, sessile. *Sea Milk Wort.*

†† *Cal. and cor.* 5-*fid*; *stam.* 5.; *fl. stalked.*

360. Anagal'lis. Cor. rotate; fl. blue, red, or pk. *Pimpernel.*
361. Lysima'chia. Cor. rotate; fl. yell. *Loosestrife.*

**** *Land pl.*; *L. all radical.*

362. Pri'mula. Cor. salver-shaped, tube cylind.; scape simple or umbellate. *Primrose.*
363. Cyc'lamen. Tube of cor. campanulate or globose; segm. of limb closely reflexed. *Sow Bread.*

***** *Land pl. (not submersed)*; *L. all alternate.*

364. Sam'olus. Fl. small, wh., in a term. rac.; cal. and cor. 5-fid.; stam. 5. *Brook Weed.*
365. Centun'culus. Fl. axillar; cal. 0.; cor. 4-fid.; stam. 4. *Chaff Weed.*

Order 62.—PLUMBAGINACEÆ.

366. Sta'tice. Fl. secund, on spikes; scape branched. *Sea Lavender.*
367. Arme'ria. Fl. in a term. globular head. *Thrift.*

Order 63.—PLANTAGINACEÆ.

368. Planta'go. Fl. perfect, spiked; caps. 2-4-seeded. *Plantain.*
369. Littorel'la. Fl. monœcious; caps. 1-seeded. M. fl. 1-2 on a stalk; F. fl. sess. *Shoreweed.*

Class IV.—Monochlamydeæ.

Order 64.—AMARANTHACEÆ.

370. Amaran'thus. Monœcious or polygamous; perianth 3-5-fid.; stam. 3-5; ovary sup. *Amaranth.*

Order 65.—CHENOPODIACEÆ.

* *L.* 0; *st. jointed.*

371. Salicor'nia. Stam. 1-2; fl. immersed in upper joints of st. *Glass Wort.*

** *With distinct L.; L. terete or semicylind.*

372. Suæ'da. L. not ending in a thorn; perianth not altered in fr. *Sea Blite.*

373. Sal'sola. L. ending in thorns; perianth with a membranous wing in fr. *Salt Wort.*

*** *With distinct L.; L. flat.*

† *Perianth 5-fid (rarely 2-3-fid); usually hermaphrodite.*

374. Chenopo'dium. Cal. not fleshy in fr.; fr. lenticular. *Goose Foot.*

375. Be'ta. Cal. fleshy in fr.; fr. reniform; styles 2. *Beet.*

†† *Fl. rarely hermaphrodite; F. fl. with 2 flat segm. much enlarged in fr.; M. fl. with a 5-fid perianth.*

376. At'riplex. *Orache.*

Order 66.—POLYGONACEÆ.

* *Fl. consisting of an external and internal perianth resembling a cal. and cor.*

377. Ru'mex. Perianth of 3 outer small and 3 inner larger segm.; achene triquetrous. *Dock.*

378. Oxy'ria. Perianth of 2 outer small and 2 inner larger segm.; achene compressed, winged. *Mountain Sorrel.*

* *Perianth of 5 nearly equal segm.*

379. Polyg'onum. Stam. 4-8; pist. 2-3; fl. red or wh., sometimes pale gr. *Knot Grass.*

Order 67.—SCLERANTHACEÆ.

380. Scleran'thus. Pl. much branched; L. linear. *Knawell.*

Order 68.—THYMELÆACEÆ.

381. Daph'ne. Fl. 4-fid.; stam. 8; fl. red or green. *Spurge Laurel.*

Order 69.—SANTALACEÆ.

382. The'sium. Fl. 4-5-fid., each with 3 linear bracts; pl. prostrate or ascending. *Bastard Toad Flax.*

Order 70.—ARISTOLOCHIACEÆ.

383. **Aristolo'chia.** Fl. clustered, tubular, enlarged at base, mouth dilated on one side; anth. 6, sess. on pist. *Birthwort.*
384. **As'arum.** Fl. solitary, campanulate; stam. 12. *Asarabacca.*

Order 71.—EMPETRACEÆ.

385. **Em'petrum.** Dicœcious; stam. 3; stig. 6. *Crake Berry.*

Order 72.—EUPHORBIACEÆ.

* *Shrubs with shining evergreen entire L.*

386. **Bux'us.** Fl. monœcious; stam. 4; pist. 3. *Box.*

** *Herbaceous, with deciduous L.*

387. **Euphor'bia.** Ovary of 3 carp. on a curved stalk; styles 3; L. usually alt.; juice milky. *Spurge.*
388. **Mercuria'lis.** Ovary 2-celled; styles 2; L. opp.; juice not milky. Monœcious or dicœcious. *Mercury.*

Order 73.—CALLITRICHACEÆ.

389. **Callit'riche.** Perianth 0; pist. 2; L. opp. *Water Star Wort.*

Order 74.—CERATOPHYLLACEÆ.

390. **Ceratophyl'lum.** Perianth many-fid.; pist. 1. *Horn Weed.*

Order 75.—URTICACEÆ.

* *L. opposite.*

391. **Hu'mulus.** Climber, dicœcious; M. fl., perianth 5-fid, stam. 5; F. fl. in scales of a strobilus. *Hop.*
392. **Urti'ca.** Erect, stinging herbs; monœcious or dicœcious; M. fl. 4-fid, stam. 4; F. fl. 2-fid. *Nettle.*

** *L. alternate.*

393. **Parieta'ria.** Stam. 4; L. entire. *Pellitory of the Wall.*

Order 76.—ULMACEÆ.

394. Ul'mus. Fl. perfect, clustered, 4-5-fid; stam. 5; pist. 2. *Elm.*

Order 77.—ELEAGNACEÆ.

395. Hippo'phae. Dicœcious. M. fl. 2-fid; stam. 4. *Sea Buckthorn.*

Order 78.—AMENTIFERÆ.

* *Monœcious; M. and F. fl. both in true catkins.*

396. Al'nus. M. catkin, sc. 3-lobed, 3-fid.; perianth 4-fid; stam. 4; F. catkin ov.; sc. ov., woody in fr. *Alder.*

397. Bet'ula. M. catkin, sc. ternate with 8-12 stam. not in distinct fl.; F. catkin cylind., close, sc. 3-fid, 3-fid. *Birch.*

** *Monœcious; F. fl. in a loose catkin, with leafy bracts.*

398. Carpi'nus. M. catkin cylind.; sc. broad; stam. about 12; bracts of F. catkin leafy, large, and 3-lobed in fr. *Hornbeam.*

*** *Monœcious; F. fl. not in a true catkin.*

399. Quer'cus. M. catkin pendulous, loose, interrupted; fr. a 1-celled nut in a cup-like inv. *Oak.*

400. Fa'gus. M. catkin globose, pendulous; F. fl. 2-3 in a many-scaled inv.; nuts 2-3, triquetrous, in a 4-valved prickly inv. *Beech.*

401. Casta'nea. M. catkin very long, cylind., interrupted; perianth 6-fid.; F. fl. 3, in 4-lobed inv.; nuts 1-2, rounded, in a prickly inv. *Chesnut.*

402. Cor'ylus. M. catkin long, cylind., pendulous; sc. 3-lobed; F. fl. several in a scaly bud-like inv.; styles 2, red. *Hazel.*

**** *Dicœcious; M. and F. fl. both in catkins.*

† *Fr. bursting with cottony hairs round seeds; L. not dotted with resinous glands.*

403. Pop'ulus. Sc. of catkins jagged; L. with long, usually flattened petioles. *Poplar.*

404. Sa'lix. Sc. of catkins entire; L. with short petioles. *Willow.*

†† *Seeds without hairs; L. dotted with resinous glands.*

405. Myri'ca. Catkins short, sessile, erect. *Bog Myrtle.*

Order 79.—CONIFERÆ.

406. **Pi'nus.** M. catkin, each sc. with 2 anther cells; F. catkin (in fr.) a dry cone, with 2 winged seeds to each sc.; L. not thorn pointed. *Fir.*
407. **Junip'erus.** M. catkin small, each sc. with 4 anther cells; fr. a 2-3 seeded berry; L. thorn-pointed. *Juniper.*
408. **Tax'us.** M. catkin small, each sc. with 3-8 anther cells; Fr. of one seed, immersed in a fleshy berry-like cup; L. in two rows. *Yew.*

Sub-Kingdom II.—ENDOGENS.

Class I.—Dictyogens.

Order 80.—TAMACEÆ.

409. **Ta'mus.** M. fl. 6-fid.; stam. 6; F. fl., ovary inf., 3-celled; stig. 3. *Black Bryony.*

Order 81.—TRILLIACEÆ.

410. **Par'is.** Sep. usually 4.; pet. usually 4, filiform; stam. usually 8; L. whorled. *Herb Paris.*

Class II.—Petaloideæ.

Order 82.—ORCHIDACEÆ.

* *Fl. with a spur, or pouch.*
† *Pl. leafless.*
411. **Epipo'gium.** Ovary not twisted; spur inflated.

†† *Pl. with leaves; sep. and pet. converging.*

412. Habena'ria. Lower lip 3-pointed or entire; anther cells diverging at base, without a beaked process between their bases. *Frog Orchis, etc.*

413. Gymnade'nia. Lower lip 3-fid, middle segm. rounded, entire; anther cells parallel at base, with a beaked process between their bases. *Red-handed Orchis.*

414. Or'chis. Lower lip 3-fid, middle segm. truncate, notched, or cleft; cells of anther with a beak between their bases. *Orchis.*

** *Fl. without a spur.*

† *Lower lip inflated, large, slipper-shapped; Fl.* 1 *or* 2.

415. Cypripe'dium. Lower lip more than 1 inch long. *Ladies' Slipper.*

†† *Lower lip entire.*

‡ *Leafless.*

Coralorhi'za (420). St. with a few gr. herbaceous sheaths.

‡‡ *Leafy; fl. on pedicels; pl.* 2-6 *inches high with greenish-yell. fl.*

416. Mala'xis. Lip uppermost, smaller than sep. *Bog Orchis*

417. Stur'mia. Lip undermost, larger than sep. *Dwarf Tway-Blade.*

††† *Leafy; fl. sessile.*

418. Spiran'thes. Sep. converging; spike twisted. *Ladies' Tresses.*

419. Goodye'ra. Sep. spreading; spike straight. *Creeping Satyrion.*

†††† *Lower lip lobed.*

‡ *St. leafless, with brown or gr. sheaths.*

420. Corallorhi'za. Lip slightly 3-lobed; st. with gr. sheaths. *Coral Root.*

421. Neot'tia. Lip 2-lobed; st. with yellowish-brown sheathing sc. *Bird's Nest Orchis.*

‡‡ *L. green.*

§ *Sep. and pet. converging; fl. sessile.*

422. A'ceras. Lower lip with 4 linear lobes, 2 longer than rest; fl. greenish-yell.; ovary nearly straight. *Man Orchis.*

423. Cephalanthe'ra. Lower lip contracted transversely into 2 lobes; ovary twisted; fl. erect; wh. or purp.

§§ *Sep. and pet. spreading; lower lip contracted transversely into 2 lobes; fl. stalked.*

424. **Epipac'tis.** Ovary straight; stalk twisted. *Helleborine. Cephalanthera* (423). Ovary twisted, sessile.

§§§ *Sep. and pet. spreading; lower lip longitudinally 2-5-fid.*

425. **Lis'tera.** L. 2, on the stem; fl. stalked; lip pendent, with 2-4 linear lobes. *Tway Blade.*

426. **Hermin'ium.** L. 2, radical; fl. sessile; lip erect, 3-5-lobed, spikes many-fld. *Musk Orchis.*

427. **Oph'rys.** Lip pendent, dull or rich brown; spike few-fld. *Insect Orchis.*

Order 83.—IRIDACEÆ.

* *Stig. 3, petaloid, arching over the stam.*

428. **I'ris.** L. equitant; outer pet. 3, large, reflexed, inner 3, smaller, erect. *Iris.*

** *Stig. 3 or more fid.; L. narrow-linear.*

429. **Cro'cus.** Perianth funnel-shaped, 6-fid with a long tube; stig. 3 fid, segm. widening upwards, often fringed. *Crocus.*

430. **Sisyrin'chium.** Perianth 6-fid.; scape 2-edged, about 4-fld. *Blue-eyed Grass.*

431. **Trichone'ma.** Perianth 6-fid, with a very short tube; stig. 3-fid, segm. 2-fid.

*** *Stig. 2, entire.*

432. **Gladi'olus.** Fl. spiked, secund; perianth 6-fid, almost 2-lipped. *Corn Flag.*

Order 84.—AMARYLLIDACEÆ.

433. **Narcis'sus.** Perianth deeply 6-fid, spreading, with a bell-shaped crown within. *Daffodil.*

434. **Galan'thus.** Perianth in 2 whorls: outer 3, larger, wh.; inner 3, shorter, notched, tinged with gr. *Snowdrop.*

435. **Lenco'jum.** Pet. 6, equal, wh. *Snowflake.*

Order 85.—LILIACEÆ.

* *Fl. usually dicœcious, growing out of the blade of the L.*

436. **Rus'cus.** L. ov., stiff. A Shrub. *Butcher's Broom.*

** *L. all from the root, often sheathing the st., but not growing from it.*

† *Fl. umbellate or corymbose, sometimes with bulbs intermixed, then in a close compact head.*

437. Ga'gea. Fl. yell., nearly umbellate, with bracts; fl. bulbs 0. *Yellow Star of Bethlehem.*

Al'lium (447). Fl. umbellate, with or without fl. bulbs; pl. smelling of Onion.

Ornithog'alum (442). Fl. corymbose, wh., gr. outside.

†† *Fl. in lax or close rac.*

‡ *Fl. globose, ov., or bell-shaped, 6-toothed.*

438. Convalla'ria. Rac. lax; fl. wh., drooping. *Lily of the Valley.*

439. Musca'ri. Rac. very close; fl. ov., blue. *Grape Hyacinth.*

‡‡ *Pet. 6, or 1, deeply 6-fid.*

440. Endym'ion. Pet. blue (rarely wh.), at length recurved at tip, united at base; fl. drooping. *Blue Bell.*

441. Scil'la. Pet. blue or pinkish, erect or spreading, distinct to base; fl. erect. *Squill.*

442. Ornithog'alum. Pet. wh., more or less gr. outside, spreading or erect. *Star of Bethlehem.*

Triglo'chin (469). Stig. feathery; fl. yellowish-gr.; L. filiform-linear.

*** *L. growing on st.*

† *St. with apparent L., really large bracts.* (*Gagea.* 437)

†† *St. branched.*

443. Aspar'agus. L. short, setaceous, clustered. *Asparagus.*

††† *St. not branched.*

‡ *Fl. single, solitary, (rarely 2) term; Pet. 6.*

444. Tu'lipa. Fl. yell., large. *Tulip.*

445. Lloy'dia. Fl. wh.; L. filiform. *Spider Wort.*

446. Fritilla'ria. Fl. drooping, usually dull red and chequered, rarely yell. or wh., with 3 or 6 nectariferous pores at base of pet. *Fritillary.*

‡‡ *Fl. in umbels, sometimes with bulbs, then in a close globular head; Pet. 6.*

447. Al'lium. Pl. smelling of Onion; fl. head with 2-3 membranous bracts at base. *Garlic.*

‡‡‡ *Fl. axillar, panicled, or spiked.*

448. Sim'ethis. Fl. panicled, wh. inside, purplish outside; fil. woolly; L. grass like.

449. Polygona'tum. L. alt., or whorled; fl. axillar, tubular, 6-fid. drooping. *Solomon's Seal.*

450. **Narthe'cium.** Fl. yell., racemose; fil. woolly; L. linear, sword-shaped, *Lancashire Asphodel.*

ORDER 86.—MELANTHIACEÆ.

451. **Col'chicum.** Fl. large, funnel-shaped, purp. *Meadow Saffron.*
452. **Tofiel'dia.** Fl. very small, in a globose or ov. term. head; pet. 6. *Scottish Asphodel.*

ORDER 87.—HYDROCHARIDACEÆ.

453. **Anach'aris.** L. sessile, whorled, submersed. *New Water Weed.*
454. **Hydroch'aris.** L. stalked, orbicular-cordate, floating. *Frog-bit.*
455. **Stratio'tes.** L. sessile, sword-shaped, prickly-serrate. *Water Soldier.*

ORDER 88.—ALISMACEÆ.

* *Fl. hermaphrodite, in a term. umb., with 3 membranous bracts at base of umb.*

456. **Bu'tomus.** Pet. 6, rose-coloured; stam. 9; carp. 6. *Flowering Rush.*
Alis'ma (458). Sep. 3; pet. 3; carp. many, 1-seeded.
Actinocar'pus (457). Sep. 3; pet. 3; carp. 6, 2-seeded.

** *Fl. hermaphrodite, wh. or pale purp., in whorls, of a pan. with whorled branches.*

457. **Actinocar'pus.** Fl. in whorls and a term. umb.; carp. 6, radiating, 2-seeded. *Star Plantain.*
458. **Alis'ma.** Fl. in an umb., or a much branched pan. with whorled branches; carp. many, 1-seeded. *Water Plantain.*

*** *Monœcious; fl. in whorls.*

459. **Sagitta'ria.** Sep. 3; pet. 3; L. sagittate. *Arrow Head.*

**** *Fl. in a raceme or spike; L. linear or filiform.*

460. **Scheuchze'ria.** Carp. 3, distinct; fl. few.
461. **Triglo'chin.** Carp. 3-6, united till ripe; fl. many. *Arrow Grass.*

Order 89.—NAIADACEÆ.

* *Submarine pl. with long linear L.*

462. Zoste'ra. L. flat; fl. in a sheath at base of L. *Sea Wrack.*

Rup'pia (465). L. setaceous.

** *Pl. of fresh, or only brackish water.*

† *Perianth* 0 *or of* 1 *leaf.*

463. Nai'as. Usually dicœcious; stam. 1, sess.; L. linear, whorled; ovary 1; stig. 3-4.

464. Zannichel'lia. Monœcious; stam. 1, on a long fil.; ovaries usually 4, each with 1 pist.; L. linear, opp. *Horned Pond Weed.*

465. Rup'pia. Stam. 4; ovaries 4, stalked; L. setaceous, alt.; fl. usually 2 on 1 ped. *Tassel Grass.*

†† *Pet.* 4; *fl. in a spike.*

466. Potamoge'ton. Stam. 4; pist. 4; achenes 4. *Pond Weed.*

Order 90.—ARACEÆ.

467. A'rum. Spadix club-like, naked above the whorled fl., in a large spathe; L. ov.-hastate. *Arum.*

468. A'corus. Spadix cylind., long, covered with the fl., with a long leaf-like bract overtopping the spadix; L. linear, erect. *Sweet Flag.*

Order 91.—TYPHACEÆ.

469. Sparga'nium. Fl. in globular heads; down 0. *Bur Reed.*

470. Ty'pha. Fl. in long cylind. spikes with much down. *Reed Mace.*

Order 92.—LEMNACEÆ.

471. Lem'na. Stam. 1-2; pl. seldom flowering. *Duck Weed.*

Order 93.—RESTIACEÆ.

472. Eriocau'lon. Fl. minute in a term. globose head; perianth 4-fid.; L. tufted, radical, linear, pellucid. *Pipe Wort.*

Order 94.—JUNCACEÆ.

473. Jun'cus. Caps. 3-celled, many-seeded ; L. rush-like. *Rush.*
474. Lu'zula. Caps. 1-celled, 3-seeded ; L. flat, grass-like. *Wood Rush.*

Class III.—Glumaceæ.

Order 95.—CYPERACEÆ.

* *Fl. monœcious.*
475. Ca'rex. Ovary enclosed in a flask-shaped tunic. *Sedge.*
476. Kobre'sia. Ovary partly enclosed within 2 short sc. within the gl.

** *Fl. hermaphrodite ; spikel with gl. in* 2 *opp. rows.*
477 Cype'rus. Spikel. many, clustered in heads or umb. ; all gl. with fl. except 1 ; st. triangular. *Cyperus.*
478. Schœ'nus. Spikel. sess. in a close term. head, lower gl. of each spikel. barren, 1-4 fertile ; stem terete. *Bog Rush.*

*** *Fl. hermaphrodite ; spikel. with gl. imbricated on all sides.*
† *Spikel. sessile, in a* 2*-ranked term. spike.*
479. Blys'mus.

†† *Ovary with bristles or hairs attached to the base.*
‡ *Several of the lower gl. empty and smaller.*
480. Rhynchos'pora. *Beak Rush.*

‡‡ *Gl. all fertile, or only* 1 *at base empty and larger.*
481. Erioph'orum. Hairs of achene (in fr.) much longer than gl., and silky. *Cotton Grass.*
482. Eleo'charis. Hairs of achene 4-12, not longer than gl. ; dilated base of style *jointed* on to ovary ; spike term., solitary. *Spike Rush.*
483. Scir'pus. Hairs of achene about 6 ; style continous with ovary. *Club Rush.*

††† *Ovary without bristles at the base.*
484. Cla'dium. Spikel. clustered in heads, in a compound leafy pan. ; L. rough on keel and edge. *Twig Rush.*

485. Isole'pis. Spikel. solitary, term., or 1-3, lateral; or in close globular heads; L. linear, subulate. *Mud Rush.*

Order 96.—GRAMINEÆ.

A. *Spikel. with* 1 *perfect fl.* (*sometimes* 1 *perfect and* 1 *bar. fl.*) *in* 2 *rows on one side of the rachis.*

* *Spike simple.*

486. Nar'dus. Gl. 0; pal. 2; style 1. *Mat Grass.*

487. Knap'pia. Gl. 2; pal. 1; styles 2; rarely 3 inches high.

** *Spikes digitate.*

488. Cy'nodon. Spikel. laterally compressed; gl. nearly equal. *Dog's Tooth Grass.*

489. Digita'ria. Spikel. dorsally compressed; gl. very unequal, with 1 bar. and 1 perfect fl. *Finger Grass.*

*** *Spikes* 2, *or more, branched.*

490. Sparti'na. Branches erect, close; pal. lanc. *Cord Grass.*

491. Pan'icum. Spikes irregularly branched; gl. with 1 perfect, and 1 bar. fl. awned. *Panick Grass.*

B. *Spikel.* 1-*fld., let into notches on alt. sides of the rachis so as to form a terete, simple spike.*

492. Leptu'rus. Gl. 1. *Hard Grass.*

C. *Spikel.* 1-*fld.; fl. in a dense spike, compound spike, or spike-like pan.*

* *Stam.* 2.

493. Anthoxan'thum. Outer gl. awnless; inner gl. awned. *Vernal Grass.*

** *Stam.* 3, *neither gl. nor pal. awned.*

† *Fl. surrounded by an inv. of bristles or a tuft of hairs.*

494. Seta'ria. Fl. with an inv. of bristles. *Bristle Grass.*

495. Ammoph'ila. A tuft of hairs at base of fl.; gl. longer than fl. *Marram.*

†† *Gl. with a polished enlargement at base.*

Gastrid'ium (498). Gl. acute, longer than fl.

††† *Fl. without hairs.*

496. Phal'aris. Gl. strongly keeled; spikel. laterally compressed. *Canary Grass.*

Pan'icum (491). Gl. not keeled; spikel. dorsally compressed.

*** *Stam.* 3; *gl. or pal. awned, or both.*

† *Gl. awned; pal. not awned.*

497. **Phle'um.** Gl. with a short term. awn. *Cat's Tail Grass.*
Polypo'gon (500). Gl. with a long awn.

†† *Gl. not awned; pal. awned.*

498. **Gastrid'ium.** Gl. with a polished enlargement at base. *Panick Millet.*
499. **Alopecu'rus.** Gl. united at base, not polished. *Fox Tail Grass.*
Ammoph'ila (495). Fl. with a tuft of hairs at base.

†† *Gl. and pal. both awned.*

500. **Polypo'gon.** Pan. cylind. or somewhat lobed; awns soft; gl. notched, awned. *Beard Grass.*
501. **Lagu'rus.** Spike ov.; awns soft; gl. not cleft, tapering into long fringed points. *Hare's Foot Grass.*
502. **Hor'deum.** Awns stiff, rough; fl. in threes: 1 or 2 perfect, the rest usually barren. *Barley.*

D. *Spikel* 1-*fld.; pan. lax, usually spreading.*

* *Gl.* 2; *pal.* 0; *pan. more or less included in the sheath of the upper L.*

503. **Leer'sia.** L. very rough. *Cut Grass.*

** *Fl. with both gl. and pal.; awns* 0.

† *Gl. longer than flor.*

Gastrid'ium (498). Gl. swollen and polished at base.
Phal'aris (496). Gl. equal; branches of pan. strong.
Agros'tis (508). Gl. not equal; branches of pan. delicate.

†† *Gl. about equal to flor.*

504. **Mil'ium.** Gl. nearly equal, green, 1-fld. *Millet Grass.*
505. **Mel'ica.** Gl. nearly equal, purplish; flor. 1-2 with a club-like rudimentary fl. *Melic Grass.*
Molin'ia (523). Gl. unequal.

*** *Gl. not awned; pal. awned.*

† *Fl. with tuft of long silky hairs at base.*

506. **Calamagros'tis.** Awn not longer than gl. *Wood Reed.*

†† *Gl. swollen at base; no hairs.*
Gastrid'ium (498). Gl. polished at base.

††† *Gl. not swollen at base; fl. without hairs at base.*

507. **Ape'ra.** Awn 2-4 times as long as spikel. *Silky Bent.*
508. **Agros'tis.** Awn less than twice as long as spikel. *Bent Grass.*

E. *Spikel. 2 or more fld., sess., or nearly so in a simple spike or spike-like pan.*

* *Spikel. sess., set alternately in notches in the sides of a flattened rachis.*

509. Trit'icum. Spikel. 1 in each notch, set with their breadth to the rachis; gl. 2. *Wheat Grass.*

510. Lo'lium. Spikel. 1 in each notch, set edgewise to rachis; gl. 1. *Darnel.*

511. El'ymus. Spikel. 2-3 in each notch. *Lyme Grass.*
Schleroch'loa (522). Stem 1-6 inches long.

** *Spikel. slightly stalked, somewhat distant, many-fld., on both sides of rachis; rachis not indented.*

512. Brachypo'dium. Fl. awned; spikel. more than ½-inch long. *False Brome Grass.*
Festu'ca (528). Awn hardly any.

*** *Spikel. more or less secund.*

513. Cynosu'rus. Each spikel. with a pectinate bract at base. *Dog's-tail Grass.*
Festuca (528). Bract 0; awn as long as pod.
Schleroch'loa (522). Bract 0; awn 0.

**** *Spike ovate.*

Cynosu'rus (513). Each spikel. with a pectinate bract at base; awn equal to pal.

514. Sesle'ria. Spike bluish-grey, with an outer bract at base. *Moor Grass.*

***** *Spike cylind. or oblong; spikel. not secund.*

515. Kœle'ria. Gl. keeled, unequal; pal. membranous, 2 or more fld. *Crested Hair Grass.*

F. *Spikel. 2 or more fld.; racemose, or panicled, usually spreading.*

* *Awns* 0.

† *Spikel. in a lax raceme.*

Mel'ica (505). Gl. coloured, 2-fld.

516. Trio'dia. Gl. 3-4-fld.; spikel. few. *Heath Grass.*

†† *Spikel. panicled.*

‡ *Gl. equal to flor. or nearly so.*

517. Hieroch'loe. Spikel. ov., shining brown. *Holy Grass.*

‡‡ *Gl. shorter than flor.*

§ *Outer pal. keeled down the back.*

518. Po'a. Outer pal. not fringed on back; spikel. ov. or linear. *Meadow Grass.*
Dac'tylis (529). Outer pal. fringed on back.

§§ *Outer pal. rounded on back (in a few slightly keeled at the top but always rounded below).*

i. *Spikel. broadly-triangular, or cordate-orbicular.*

519. **Bri'za.** Spikel. about 7-fld. *Quaking Grass.*

ii. *Spikel. almost invariably 2-fld. (rarely 3-5.)*

520. **Catabro'sa.** Gl. very obtuse, much shorter than fl.

iii. *Spikel. mostly more than 2-fld.; outer pal. obtuse or very slightly pointed at end.*

521. **Glyce'ria.** Outer pal. with 5-7 strong nerves or ribs; margin membranous. *Sweet Grass.*

522. **Schleroch'loa.** Outer pal. with 5 faint nerves, often keeled at tip. *Hard Meadow Grass.*

iv. *Spikel mostly more than 2-fld.; outer pal. very acute.*

523 **Molin'ia.** Pan. purplish, gl. 2-fld.
Festu'ca (528). Pan. gr. or whitish; gl. 3- or more fld.

** *Flor. awned.*

† *With long silky hairs at base.*

524. **Phragmi'tes.** Pan. large, purplish or purp-brown; L. broad; spikel. 3-5 fld. *Reed.*

†† *With a club-shaped awn, jointed in the middle, and a tuft of hairs at the point.*

525. **Coryne'phorus.** Spikel. 2-fld.; awn not longer than gl. *Grey Hair Grass.*

††† *Awn very short, included in the gl. or hardly exserted; gl. 2-fld.*

526. **Hol'cus.** Upper flor. awned; lower not awned. *Soft Grass.*
Ai'ra (532). Both flor. awned.

†††† *Awn springing from above the middle of pal.; gl. 3 or more fld.*

527. **Bro'mus.** Outer pal. rounded on back, 2-fid at end; awn from below tip of pal. *Brome Grass.*

528. **Festu'ca.** Outer pal. rounded on back, very acute, entire; awn term. (or rarely from just below tip of pal.) *Fescue Grass.*

529. **Dac'tylis.** Outer pal. keeled and fringed on back; awn short. *Cock's Foot Grass.*

††††† *Awn attached to pal. at or below its middle; gl. 2-fld.*

530. **Ave'na.** Outer pal. with 2 teeth or bristles at end, and a long kneed twisted awn. Both fl. perfect. *Oat Grass.*

531. **Arrhenathe'rum.** Outer pal. with 2 points at end; upper fl. perfect, with a short straight awn; lower M. only, with a long kneed and twisted awn. *Oat Grass.*
532. **Ai'ra.** Awn fine, twisted, never much longer than flor.

SUB-KINGDOM III.—ACROGENS.

ORDER 97.—EQUISETACEÆ.

533. **Equise'tum.** Fl. in a term. cone. *Horse Tail.*

ORDER 98.—MARSILIACEÆ.

534. **Pilula'ria.** Rhizome creeping, giving off 2-3 setaceous L. at intervals; inv. globose, sessile at base of L. *Pill Wort.*
535. **Isoe'tes.** Stemless, tuberous; L. many, tufted, subulate; fruct. within enlarged bases of L. *Quill Wort.*

ORDER 99.—LYCOPODIACEÆ.

536. **Lycopo'dium.** St. branched, usually creeping; L. imbricated; caps. 1-celled, 2-valved containing powder, or 3-valved, with 1-4 large grains. *Club Moss.*

ORDER 100.—FILICES.

A. *Fruct. in a spike or pan., not on the back of the frond.*
* *Spike or pan. separate from the frond.*
537. **Ophioglos'sum.** Frond simple, ov., or lanc.; spike linear. *Adder's Tongue.*

538. **Botrych'ium.** Frond pinnate; spike or pan. branched. *Moon Wort.*

** *Fruct. in a much branched pan. at end of frond.*

539. **Osmun'da.** Frond bipinnate. *Royal Fern.*

B. *Fruct. within cup-shaped or thimble-shaped inv. in the marginal substance of the frond.*

540. **Trichom'anes.** Inv. thimble-shaped, opening outwards, with a long bristle-like recept. in the centre. *Bristle Fern.*

541. **Hymenophyl'lum.** Inv. roundish, compressed, 2-valved, opening outwards; recept. not bristly or prolonged beyond inv. *Filmy Fern.*

C. *Fructification on the back of the frond.*

* *Back of frond covered with chaffy sc.*

542. **Cet'erach.** Sc. covering the sori; frond pinnatifid.

** *Sori covered by the inrolled margin of the lts.*

543. **Pte'ris.** Frond 3-fid; branches bipinnate; st. somewhat woody; final segm. of frond lanc., entire. *Brake.*

544. **Alloso'rus.** Bar. frond bi-tripinnate, herbaceous; final segm. toothed. *Parsley Fern.*

*** *Sori covered by a membranous portion of the margin of the frond folded back.*

545. **Adian'tum.** Frond pinnate or bipinnate; lts. roundish-cuneate, lobed; sori at ends of lobes. *Maidenhair.*

**** *Margin of frond not covering the sori at all.*

† *Indusium* 0.

546. **Polypo'dium.** Sori circular. *Polypody.*

547. **Gymnogram'ma.** Sori linear, or caps. scattered over the back of the frond.

†† *Indusium open, inf., divided into capillary segm. giving the frond a hairy appearance beneath.*

548. **Wood'sia.** Frond pinnate; segm. pinnatifid. *Woodsia.*

††† *Sori roundish or oval, covered with an indusium when young.*

549. **Polys'tichum.** Indusium circular, attached by centre. *Prickly Fern.*

550. **Lastræ'a.** Indusium reniform, attached by the notch. *Shield Fern.*

551. **Cystop'teris.** Indusium very convex, hooded, circular or ov., the broad end attached beneath the lower side of the sorus; the other end free, fringed, often vanishing early. *Bladder Fern.*

†††† *Sori oblong -or linear, covered by an indusium when young.*

‡ *Frond usually undivided, rarely 2-fid or lobed.*

552. **Scolopen'drium.** Sori in one row on each side of midrib, diverging from it, and never touching it. *Hart's Tongue.*

‡‡ *Frond pinnate or bipinnate.*

553. **Blech'num.** Frond pinnate; sori linear, parallel with midrib of the leafl. *Hard Fern.*

554. **Ásple'nium.** Sori linear, straight, diverging from midrib of leafl. *Spleen Wort.*

555. **Athyr'ium.** Sori oblong, reniform; inner edge of indusium fringed; frond bipinnate; segm. pinnatifid. *Lady Fern.*

SPECIES.

ORDER 1.—RANUNCULACEÆ.

1. CLE'MATIS. Traveller's Joy.

1. **C. Vitalba.** L. pinnate; fl. in pan, Sh. 7. *Hed.—Wh.*

2. ANEMO'NE. Anemone.

* *Fl. blue or purp.*

1. **A. apennina.** Pet. many, spreading. Achenes not awned. P. 4. *Wds.!—Blue.*
2. **A. Pulsatilla.** Pet. 6, erect, silky outside. Achenes awned. P. 4-5. *Calc. past.—Purp.—Pasque flower.*

** *Fl. yell., white or pinky; L. ternate or quinate.*

3. † **A. ranunculoides.** Fl. yell; pet. 5. P. 4. *Wds.!*
4. **A. nemorosa.** Fl. white or pinky; pet. 5. P. 4-5. *Wds.—Wood Anemone.*

3. THALIC'TRUM. Meadow Rue.

* *L. biternate.*

1. **T. alpinum.** St. simple; pan. term. P. 6-7. *High mtns.—Wh.*

** *L. bipinnate or tripinnate.*

† *Fl. erect.*

2. **T. flavum.** Lts. cuneate, 3-fid.; pan. close. P. 6-7. *Wat. pl. —Yellowish.*

†† *Fl. drooping; st. leafless; fl. pale purple.*

3. **T. minus.** St. zigzag; pan. with spreading branches. P. 6-7. *Dry Past.*

††† *Fl. drooping; st. leafy; fl. pale purp.*

4. **T. saxatile.** St. zigzag, striated, hollow; pan. branched, pyramidal. P. 6-7. *Calc. rocks!*
5. **T. majus.** St. zigzag, angular, hollow; pan. somewhat umbellate. P. 6-7. *Dry pl.*

6. T. flexuosum. St. zigzag, striated, solid; pan. long, oval, spreading. P. 6-7. *Calc. rocks* !

4. ADO'NIS. Pheasant's Eye.

1. A. autumnalis. L. alt., tripinnatifid. A. 7. *Corn-fds.*!—*Scarlet.*

5. MYOS'URUS. Mousetail.

1. M. minimus. St. leafless; L. linear. A. 5. *Corn-fields.*—*Yell.*

6. RANUN'CULUS. Crowfoot.

* *Fl. white.*

† *L. simple or trifid, never in capillary segm.*

1. R. hederaceus. L. reniform, 3-5-lobed; stam. 5-10. P. 4-7. *Wet pl.*—*Wh.*
2. R. cœnosus. L. cordate-reniform, 3-5-lobed; pet. longer than cal.; styles of fr. term. P. 4-7. *Wet pl.*—*Wh.*
3. R. tripartitus. St. floating; L. 3-fid, lobes 2-4 fid; style long. A. 5-8. *Dit* !—*Wh.*

†† *L. all (or almost always) submersed and cleft into hair-like segm.*

4. R. circinatus. Segm. of L. rigid, repeatedly forked, forming a whorl with a circular outline. P. 6-7. *Ponds and dit.*—*Wh.*
5. R. fluitans. Segm. of L. repeatedly forked, long, parallel; stip. large, adnate. P. 6-7. *Riv. and brooks.*—*Wh.*

☞ Varieties of the two next species have sometimes only capillary L.

††† *Floating L. 3-lobed; submersed L. in capillary segm.*

6. R. confusus. Stig. strap-shaped; recept. conical. A. 5-7. *Dit.*—*Wh.*
7. R. aquatilis. Stig. rounded; recept. globose. P. 5-6. *Ponds and dit.*—*Wh.*

** *Fl. yell.; carp. prickly or tubercled.*

8. R. arvensis. Erect. Carp. prickly; L. once or twice 3-fid; segm. linear. A. 6-7. *Corn-fields.*—*Yell.*
9. R. parviflorus. Prostrate. Carp. tubercled; L. 3-5 lobed, hairy. A. 5-6. *Hed. and fds.*—*Yell.*

(R. hirsutus 15.*)*

*** *Fl. yell.; L. entire, or only slightly lobed; carp. not prickly.*

10. R. Lingua. St. erect; L. lanc., sess.; fl. large. P. 7-8. *Ponds and dit.* !—Great Spearwort.
11. R. flammula. St. decumbent at base and rooting; L. lanc. or linear-lanc., stalked. P. 6-9. *Wat. pl.*—Lesser Spearwort.

12. **R. ophioglossifolius.** Lower L. cordate-ov., stalked, upper oblong, sess., clasping; st. erect. **A.** 6. *Ch. Is.*!—*Yell.*
13. **R. Ficaria.** Sep. 3; pet. 8-12, varnished; L. angular-cordate. **P.** 4-5. *Damp pl.—Yell.*—Little Celandine.

******** *Fl. yell.; L. ternately cut; sep. reflexed.*

14. **R. bulbosus.** Root bulbous; st. and L. hairy; achenes smooth. **P.** 5. *Mead.*—Buttercup.
15. **R. hirsutus.** Root fibrous; st. and L. hairy; achenes margined with tubercles. **A.** 6-9. *Waste grd. and fds.*
16. **R. sceleratus.** St. and L. glabrous; st. hollow; heads of fr. oblong. **A.** 6-8. *Wat. pl.*

********* *Fl. yell.; L. cut; sep. erect or spreading.*

17. **R. auricomus.** Erect, nearly glabrous; root-L. reniform, 3-lobed; st-L. digitate; segm. linear; pet. often wanting. **P.** 4-5. *Wds.*
18. **R. acris.** Erect; st., L., and sep. hairy; L. deeply 3-fid; segm. cleft. **P.** 6-7. *Mead.*—Buttercup.
19. **R. repens.** St. with creeping runners, hairy, ped. furrowed. **P.** 5-8. *Ro. si. and Waste pl.*

7. CAL'THA. Marsh Marygold.

1. **C. palustris.** L. cordate-rounded, crenate; fl. large. **P.** 3-5. *Mar. pl.—Yell.*

8. TROL'LIUS. Globe Flower.

1. **T. Europœus.** Fl. large, globose; sep. converging; L. deeply 5-fid; segm. cut; st. erect. **P.** 6-7. *Mtn. past.—Yell.*

9. ERAN'THIS. Winter Aconite.

1. † **E. hyemalis.** St. with 2 sess., cut L., just below fl.; fl. solitary, term. **P.** 2-3. *Thickets.—Yell.*

10. HELLEB'ORUS. Hellebore.

1. **H. viridis.** Sep. spreading; fl. few, axillar and term.; L. digitate. **P.** 4-5. *Wds.—Gr.*
2. **H. fœtidus.** Sep. converging; fl. many in a term. pan.; L. pedate. **P.** 3-4. *Thickets and hed.—Gr., tinged with purp.*

11. AQUILE'GIA. Columbine.

1. **A. vulgaris.** Root-L. biternate. **P.** 5-6. *Thickets.—Blue.*

12. DELPHIN'IUM. Larkspur.

1. **D. consolida.** L. sess., segm. linear; st. erect; fl. in rac. **A.** 6-7. *Corn-fds., etc.—Blue, pk. or wh.*

13. ACONI'TUM. Monkshood.

1. **A. Napellus.** St. erect; L. deeply 5-fid, segm. linear, cut; fl. in a close term. rac. **P** 6-7. *Riv. si., etc.—Deep blue.*!

14. ACTÆ'A. Bane Berry.

1. **A. spicata.** L. bi-triternate; lts. ov., serrate. P. 5-6. *Wds. in N.*!—*Wh.*

15. PÆO'NIA. Pœony.

1. † **P. corallina.** L. biternate; lts. ov., entire. P. 5-6. *Rocks in Severn.* !—*Crims.*

ORDER 2.—BERBERIDACEÆ.

16. EPIME'DIUM. Barren-wort.

1. † **E. alpinum.** St. L. bi-triternate; lts. cordate, ciliate-serrate. P. 5. *Mtn. wds.*!—*Red.*

17. BER'BERIS. Barberry.

1. **B. vulgaris.** L. obovate, ciliate-serrate; thorns triple; fl. in rac. P. 5-6. *Hedg.*—*Yell.*

ORDER 3.—NYMPHÆACEÆ.

18. NYMPHÆ'A. White Water Lily.

1. **N. alba.** L. cordate-orbicular, floating. P. 6-7. *Ponds, etc.*—*Wh.*

19. NU'PHAR. Yellow Water Lily.

1. **N. lutea.** Stig. 10-20-rayed, rays not reaching to margin; L. oblong-cordate. P. 7. *Riv.*—*Yell.*
2. **N. pumila.** Stig. 8-10-rayed, rays acute, forming marginal teeth. P. 7. *Sco. Lakes*!—*Yell.*

ORDER 4.—PAPAVERACEÆ.

20. PAPA'VER. Poppy.

* *Pet. white with a violet spot at base.*

1. † **P. somniferum.** L. clasping, glabrous. A. 7. *Near sea and fens.*

** *Pet. red; caps. bristly.*

2. **P. Argemone.** Caps. oblong or club-shaped. A. 6-7. *Fds. etc.*
3. **P. hybridum.** Caps. ov.-globose. A. 7. *Fds.*

*** *Pet. red; caps. smooth.*

4. **P. Rhœas.** Caps. nearly globose, or urn-shaped. A. 6-7. *Fds.*
5. **P. dubium.** Caps. oblong or club-shaped. A. 6-7. *Fds.*

21. MECONOP'SIS. Welsh Poppy.

1. **M. Cambrica.** Caps. oblong; L. pinnate, cut. P. 6. *Rocky pl., W. Eng.*—*Yell.*

22. Rœmē'ria. Rœmeria.

1. † **R. hybrida.** L. bipinnatifid; segm. linear; pod slightly bristly. A. 6. *Chalky corn-fds.* !—*Viol.*

23. Glau'cium. Horn Poppy.

1. **G. luteum.** St.-L. clasping, lobed, wavy, hairy, glaucous. B. 6-8. *San. sh.*—*Yell.*

24. Chelido'nium. Great Celandine.

1. **C. majus.** L. large, pinnatifid, glabrous. P. 5-6. *Hedg., etc.*—*Yell.*

Order 5.—FUMARIACEÆ.

25. Fuma'ria. Fumitory.

* *Segm. of L. flat.*

1. **F. capreolata.** Sep. ov., toothed, as broad as cor.-tube; st. climbing or spreading. A. 6-9. *Hedg.*—*Crm. or pale pk.*
2. **F. officinalis.** Sep. ov.-lanc., toothed, narrower than cor.-tube; st. erect or spreading. A. 5-9. *Fds., etc.*—*Rose or purp.*
3. **F. Vaillantii.** Sep. very minute, deltoid; segm. of L. very narrow, almost capillary; fl. small. A. 6-9. *Fds.* !—*Pale purp. or white.*

** *Segm. of L. channelled.*

4. **F. micrantha.** Sep. large, roundish, toothed, broader than tube of cor.; bracts longer than pedicel. A. 6-9. *Fds.* !—*Pale purp.*
5. **F. parviflora.** Sep. minute, ov., cut; bracts equal to pedicel. A. 8-9. *Fds.* !—*Wh. or pale purp.*

26. Coryd'alis. Corydalis.

1. † **C. solida.** Fl. purplish; root tuberous; L. biternate. P. 4-5. *Wds.* !
2. † **C. lutea.** Fl. yell. Erect; L. triternate; tendrils 0. P. 5-7. *Old Walls, etc.*
3. **C. claviculata.** Fl. crm.-coloured or yellowish; pl. climbing, with tendrils; L. pinnate. A. 6-9. *Hills and stony pl.*

Order 6.—CRUCIFERÆ.

27. Cram'be. Sea Kale.

1. **C. maritima.** L. wavy, glaucous, roundish; pan. much branched. P. 6. *Sea sh.*—*Wh.*

28. Caki'le. Sea Rocket.

1. **C. maritima.** L. fleshy, pinnatifid. A. 6-7. *Sandy sh.*—*Pk.*

29. Isa'tis. Wood.

1. † I. tinctoria. Erect; st.-L. sagittate, entire. B. 7. *Cult. fds.—Yell.*

30. Camelī'na. Gold of Pleasure.

1. † C. sativa. L. lanc., sagittate; pods obovate. A. 6. *Cult. grd.—Yell.*

31. Cochlea'ria. Scurvy-grass.

1. C. officinalis. Root-L. roundish-cordate, stalked, upper L. sess., oblong; pod globose or ov., very convex. A. 5-7. *Sea Co. and Mtns.—Wh.*
2. C. anglica. Root-L. ov., entire, stalked; st.-L. sessile, toothed; pod oval, compressed. A. 5. *Mud. Sea Sh.—Wh.*
3. C. danica. L. cordate-angular; pod roundish-ov. A. 5-8. *Sea Co.—Wh.*

32. Armora'cia. Horse-radish.

1. A. rusticana. Root-L. large, oblong, crenate; st.-L. lanc. P. 5. *Damp pl.—Wh.*

33. Coro'nopus. Swine's-cress.

1. C. Ruellii. Pods entire, muricated, in short close clusters; style prominent; L. pinnatifid; segm. cut. A. 6-9. *Waste grd.—Wh.*
2. C. didyma. Pods notched, 2-lobed, minute, in long lax rac.; style very short; L. pinnate. A. 7-8. *Waste grd. near sea, in S. Eng. and Irel.—Wh.*

34. Lepid'ium. Pepper-wort.

* *Style distinct; st.-L. sagittate, clasping.*

1. † L. Draba. Pod broadly cordate; L. oblong; style prominent. P. 5-6. *Banks, etc.!—Wh.*
2. L. Smithii. Pod ov., smooth; L. lanc.; style prominent; lower ped. reflexed in fr. A. 7-8. *Fds.—Wh.*
3. L. campestre. Pod ov., rough; L. lanc.; style scarcely longer than notch of caps.; lower ped. deflexed in fr. A. 7-8. *Fds., etc.—Wh.*

** *Style very minute or* 0.

† *Lower L. pinnatifid or bipinnatifid; upper entire.*

4. † L. sativum. Pod orbicular, winged; stam. 6. A. 5-6. *Waste grd.—Wh.*
5. L. ruderale. Pet. usually 0; stam. 2. A. 5-8. *Waste grd. near sea.*

†† *None of the L. cleft.*

6. L. latifolium. L. ov. or ov.-lanc., serrate or entire, stalked. P. 7-8. *Salt Mar.—Wh.*

35. IBE'RIS. Candy-tuft.

1. I. amara. L. lanc., acute, cut; st. branched. A. 7. *Chalky Corn-fields.—Wh.*

36. TEESDA'LIA. Teesdalia.

1. T. nudicaulis. L. mostly radical and lyrate. A. 5-6. *Dry grav. pl.—Wh.*

37. HUTCHIN'SIA. Hutchinsia.

1. H. petræa. St. branched, leafy; L. pinnatifid. Rarely more than 3 inches high. A. 3-5. *Walls and rocks.—Wh.*

38. SUBULA'RIA. Awl-wort.

1. S. aquatica. 1-3 inches high; L. all radical. A. 7. *Edges of lakes.—Wh.*

39. THLAS'PI. Penny-cress.

1. T. arvense. St.-L. sagittate, sessile; pod nearly circular, notched. A. 5-7. *Corn-fields.—Wh.*
2. T. perfoliatum. St.-L. cordate-ov., toothed, clasping; pod obcordate. A. 4-5. *Calc. past.* !—*Wh.*
3. T. alpestre. St.-L. oblong-cordate, clasping; pod obovate, obtuse. P. 6-8. *Mtn. past.—Wh.*

40. CAPSEL'LA. Shepherd's Purse.

1. C. Bursa-Pastoris. Root-L. pinnatifid or entire; st.-L. lanc., sess., sagittate at base. A. 3-11. *Waste and cult. grd.—Wh.*

41. KON'IGA. Sweet Alyssum.

1. † K. maritima. L. lanc. or linear; st. branched; pod elliptic. P. 8-9. *Near sea.—Wh.*

42. ALYS'SUM. Alyssum.

1. † A. calycinum. L. oblong-lanc.; pod circular. P. 5-6. *Fds.—Yellowish.*

43. DRA'BA. Whitlow Grass.

* *Fl. yellow.*

1. D. aizoides. L. all radical, stiff, lanc., fringed. P. 3-4. *Rocks and walls.* !

** *Fl. white; scapes leafless, or with at most* 1-2 *L.*

2. D. verna. Pet. cleft; L. all radical; pod elliptic. A. 2-4. *Walls, etc.*
3. D. rupestris. Pet. entire; st. very short, branched; scapes with 1-2 L.; pod lanc. P. 5-7. *Sco. Mtns.*

*** *Fl. white; st. leafy.*

4. D. muralis. St.-L. cordate, clasping. A. 4-5. *Mtns. and walls.*
5. D. incana. St.-L. lanc.; pod twisted. B. 5-7. *Mtns.*

44. RAPH'ANUS. Radish.

1. R. Raphanistrum. Beak longer than pod; L. lyrate. A. 6-7. *Corn-fds.—Yell. or Wh.*
2. R. maritimus. Beak shorter than pod; root-L. interruptedly-pinnate. B. 5-8. *Sea Co.—Yell.*

45. ERY'SIMUM. Treacle Mustard.

1. E. cheiranthoides. L. lanc., with stellate hairs; fl. small. A. 6-7. *Fds.—Yell.*
2. † E. orientale. L. cordate-oval, clasping; root-L. obovate. A. 5-7. *Sea Cliffs.* !—*Crm.*

46. CHEIRAN'THUS. Wallflower.

1. † C. Cheiri. L. lanc., acute; st. woody below. P. 4-6. *Walls.—Yell.*

47. HES'PERIS. Dame's Violet.

1. † H. matronalis. St. erect; L. ov.-lanc., toothed, hairy. P. 5-6. *Banks, etc.* !—*Pale purp.*

48. MATTHI'OLA. Stock.

1. M. incana. L. lanc., entire, hoary; pod cylind. P. 5-6. *Cliffs, S. Co.* !—*Pale purp.*
2. M sinuata. Lower L. deeply sinuate; pod compressed, rough with glandular elevations. B. 5-8. *San. Co. in W. and S.—Purp. or Red.*

49. MALCOL'MIA. Virginian Stock.

1. † M. maritima. St. erect, branched, spreading; L. elliptic, entire, obtuse. A. 5-6. *Sea Shore.* !—*Pk.*

50. SINA'PIS. Mustard.

* *Beak longer than pod.*

1. S. alba. Beak stout, sword-shaped, flattened; pod bristly; L. lyrate. A. 6-8. *Fds.—Yell.*

** *Beak shorter than pod; pods adpressed.*

2. S. nigra. Pod 4-angled, smooth; lower L. lyrate, slightly rough. A. 6-8. *Fds. and waste pl.—Yell.*
3. S. incana. Pod cylind., very short; lower L. lyrate, rough. P. 6-7. *Ch. Is.—Yell.*

*** *Beak shorter than pod; pods spreading.*

4. S. arvensis. Pod knotty; L. all rough. A. 6-9. *Fds., etc.—Yell.*

51. Bras'sica. Cabbage.

* *Upper L. clasping.*

1. **B. campestris.** Lower L. lyrate, rough; upper L. cordate-ov., or cordate-lanc. **A.** 6-8. *Fds.—Yell.*
2. † **B. Napus.** Lower L. lyrate, glabrous; upper L. cordate-acuminate. **B.** 5-6. *Fds.—Yell.*

** *Upper L. not clasping.*

3. **B. oleracea.** All L. thick and fleshy, glaucous, glabrous, lower lyrate. **B.** 5-6. *Sea Cliffs.—Pale Yell.*
4. **B. Monensis.** L. pinnatifid; pod with 10 or more seeds in each cell. **P.** 6-8. *W. Co.—Pale Yell.*

52. Sisym'brium. Hedge Mustard.

* *L. entire, or slightly toothed.*

1. **S. thalianum.** Pods 4-angled; L. oblong, mostly radical, hairy. **A.** 4-5. *Bks.—Wh.*

** *L. deeply cleft; pods adpressed.*

2. **S. officinale.** L. runcinate; st. rigid, branched. **A.** 6-7. *Waste grd.—Yell.*

*** *L. deeply cleft; pods spreading.*

3. † **S. polyceratium.** L. sinuate-runcinate; pedicels in threes, very short, axillary. **A.** 6-7. *E. Eng.*!—*Yell.*
4. **S. Irio.** L. runcinate; fl. in rac. **A.** 7-8. *Waste grd.* !—*Yell.* —London rocket.
5. **S. Sophia.** L. bi-tripinnate; lts. linear; fl. in rac. **A.** 6-9. *Waste Grd.—Yell.*—Flix weed.

53. Allia'ria. Jack by the Hedge. Sauce alone.

1. **A. officinalis.** L. cordate, crenate, stalked. **A.** 5. *Hedg.—Wh.*

54. Ar'abis. Rock-cress.

* *Lower L. more or less pinnately lobed.*

1. **A. stricta.** St. hairy below, nearly simple; st.-L. sess. **P.** 4-5. *Rocks* !—*Crm.*
2. **A. petræa.** St. glabrous, branching at base; st.-L. stalked. **P.** 6-8. *Alp. rocks.—Wh.*

** *L. not cleft; st. hairy, in one species glabrous; st. L. ov.-lanc., clasping.*

3. **A. hirsuta.** Pods erect in fr.; st. and L. hairy. **P.** 5-7. *Banks' walls, etc.—Wh.*
4. **A. ciliata.** Pods nearly erect; st. glabrous; L. nearly glabrous, ciliate at edge. **B.** 7-8. *Irel.* !—*Wh.*

5. † **A. Turrita.** Pods curved downwards in fr. **B.** 5. *Walls*!—*Whitish.*

55. CARDAMI'NE. Bitter-cress.

* *Stam.* 4.

1. **C. hirsuta.** Lts. of root-L. roundish, term. one larger; pet. small. **A.** 4-7. *Banks and damp pl.—Wh.*

** *Stam.* 6; *L. with stip.*

2. **C. impatiens.** Lts. lanc. or ov., cut. **A.** 5-6. *By Mtn. streams.—Wh.*

*** *Stam.* 6; *stip.* 0.

3. **C. sylvatica.** Anth. yell.; st. zigzag; Lts. of lower L. roundish, unequal-sided, of upper variable; fl. small. **A.** 4-8. *Damp pl.—Wh.*
4. **C. pratensis.** Anth. yell.; lts. of lower L. roundish, of upper, linear; fl. large. **P.** 4-5. *Damp mead.—Lilac.*
5. **C. amara.** Anth. purp.; lts. all ov. or oblong; st. angular, leafy. **P.** 4-6. *Wet mead., etc.—Wh. or lilac.*

56. DENTA'RIA. Coral-wort.

1. **D. bulbifera.** Upper L. entire. **P.** 5-6. *Wds.*!—*Purp.*

57. BARBARE'A. Winter-cress.

* *Pods adpressed.*

1. **B. stricta.** Lower L. lyrate, uppermost toothed, not cleft; fl. small. **P.** 5-8. *Wet pl.—Yell.*

** *Pods spreading.*

2. **B. vulgaris.** Lower L. lyrate, uppermost toothed, not cleft. **P.** 5-8. *Watery pl.—Yell.*
3. † **B. præcox.** Lower L. lyrate, uppermost pinnatifid; segm. all linear. **B.** 4-9. *Waste pl.—Yell.*

58. NASTUR'TIUM. Water-cress.

* *Fl. white.*

1. **N. officinale.** L. pinnate; lts. roundish, or ov. **P.** 6-7. *Wat. pl.—Wh.*

** *Fl. yell.*; *pods much shorter than their pedicels.*

2. **N. amphibium.** L. ov., oblong, or lanc., sess., toothed, or pinnatifid. **P.** 6-8. *Wat. pl.—Yell.*

*** *Fl. yell.*; *pods equal to pedicel.*

3. **N. sylvestre.** Pet. twice as long as sep.; L. pinnatifid; lts. lanc. **P.** 6-8. *Wat. pl.—Yell.*
4. **N. palustre.** Pet. equal to sep.; L. pinnatifid, lower L. lyrate. **P.** 6-9. *Wat. pl.—Yell.*

59. DIPLOTAX'IS. Wall Mustard.

1. **D. tenuifolia.** St. glabrous, branched, woody below; st.-L. pinnatifid, sometimes only sinuate or toothed. **P.** 5-9. *Old walls.—Yell.*
2. **D. muralis.** St. simple, with deflexed hairs; L. chiefly radical, pinnatifid, sometimes sinuate. **A.** 7-9. *San. grd.—Yell.*

60. TURRI'TIS. Tower Mustard.

1. **T. glabra.** St.-L. ov.-lanc., entire, clasping, glabrous. **A.** 5-6. *Banks.—Crm.*

ORDER 7.—RESEDACEÆ.

61. RESE'DA. Mignionette. Weld.

* *L. entire.*

1. **R. Luteola.** L. linear or lanc.; sep. 4; pet. 4 or 5. **A.** 7-8. *Waste grd.—Yell.*

** *L. cleft.*

2. **R. lutea.** L. 3-fid or pinnatifid; sep. 6; pet. 6, very irregular. **B.** 7-8. *Calc. soil.—Yell.*
3. **R. alba.** L. all pinnatifid; sep. 5-6; pet. 5-6, 3-fid, nearly equal. **P.** 7-8. *Waste grd. near sea.* !—*Wh.*

ORDER 8.—CISTACEÆ.

62. HELIAN'THEMUM. Rock Rose.

* *Herbaceous, erect.*

1. **H. guttatum.** L. lanc. or linear; rac. without bracts; pet. spotted. **A.** 6-8. *Ch. Is.* !—*Yell.*
2. **H. Breweri.** L. obovate; rac. with bracts; pet. not spotted. **A.** 6-8. *Anglesea* !—*Yell.*

** *Pl. more or less shrubby.*

3. **H. vulgare.** Decumbent, with stip.; L. oblong, flat, green above, hoary beneath. **Sh.** 7-8. *Dry pl.—Yell.*
4. **H. polifolium.** Procumbent, with stip.; L. oblong, edges revolute, hoary on both sides, with stellate hairs. **Sh.** 6-7. *Downs, S. Eng.* !—*Wh.*
5. **H. canum.** Decumbent; stip. 0; L. opp., flat, ov., or oblong, hoary beneath; fl. small. **P.** 5-6. *Mtn. past.* !—*Yell.*

ORDER 9.—VIOLACEÆ.

63. VI'OLA. Violet.

* *Stemless or nearly so; sep. obtuse.*

1. **V. hirta.** L. cordate-oblong, or cordate, hairy; runners 0; bracts below mid. of scape. P. 4-5. *Calc. past. and wds.—Blue.*
2. **V. odorata.** L. cordate; root with creeping runners; bracts above mid. of scape; stig. hooked. P. 4-5. *Bks.—Purp. or wh.*—Sweet violet.
3. **V. palustris.** L. reniform, glabrous; spur very short; stig. broad, oblique. P. 4-6. *Bogs.—Lilac.*

** *With an evident st.; stip. pinnatifid or palmate; style club-shaped; stig. inflated.*

4. **V. tricolor.** Stip. pinnatifid; term. lobe largest, upper L. ov., crenate. A. 4-8. *Fds.—Wh., yell. or purp.*—Pansy.
5. **V. lutea.** Stip. palmately lobed, term. lobe not larger than rest, entire; fl. large. P. 6-7. *Hilly past.—Yell. or purp.*

*** *With an evident st.; stip. ciliate, toothed, pectinate or entire.*

6. **V. sylvatica.** L. cordate, or broadly cordate; stip. lanc., fringed. P. 4-5. *Wds. and bks.—Blue.*—Dog violet.
7. **V. arenaria.** L. roundly cordate; stip. ov., spreading; caps. acute, downy. P. 5-6. *N. Eng.* !—*Blue.*
8. **V. flavicornis.** L. cordate-oblong; stip. ov., or lanc., toothed, or ciliate. P. 4.-5. *Bks.—Blue.*
9. **V. stagnina.** L. ov.-lanc., cordate at base; stip. linear-lanc., serrate. P. 5-6. *Turf bogs.* !—*Blue or wh.*

ORDER 10.—DROSERACEÆ.

64. DRO'SERA. Sundew.

1. **D. rotundifolia.** L. circular; petiole hairy. P. 7-8. *Bogs.—Wh.*
2. **D. intermedia.** L. obovate; petiole glabrous; styles 6. P. 7-8. *Bogs.—Wh.*
3. **D. anglica.** L. oblong, erect; petiole glabrous; styles 8. P. 7-8. *Bogs.—Wh.*

ORDER 11.—POLYGALACEÆ.

65. POLYGALA. Milk-wort.

1. **P. vulgaris.** L. scattered; lower oval, smaller, upper lanc. P. 6-7. *Dry past.—Blue, pk., or wh.*
2. **P. calcarea.** L. in a *term.*, rosette, with short flowering branches from axils of large rosette L. P. 6-7.—*Dry hills, S. Eng.—Blue.*
3. **P. uliginosa.** Pl. with a *radical* rosette of larger L, with short flowering branches from axils of rosette L. P. 6-7. *Hills in N. Eng.* !—*Blue or wh.*

Order 12.—FRANKENIACEÆ.

66. Frankenia. Sea Heath.

1. **F. lævis.** L. linear; fl. solitary, sess. P. 7. *Salt mar.—Flesh.*

Order 13.—ELATINACEÆ.

67. Ela'tine. Water wort.

1. **E. hexandra.** Pet. 3; stam. 6; pist. 3; L. spathulate. A. 7-8. *Under water.—Rose.*
2. **E. Hydropiper.** Pet. 4; stam. 8; pist. 4; L. spathulate. A. 8. *Under water.—Wh.*

Order 14.—CARYOPHYLLACEÆ.

68. Dian'thus. Pink.

* *Fl. in close bundles.*

1. **D. prolifer.** Scaly bracts outside cal., ov., membranous; fl. capitate, quite enclosed by brown scaly bracts. A. 7. *San. past.!—Red.*
2. **D. armeria.** Scaly bracts outside cal. lanc.; fl. clustered; st. and L. downy. A. 7-8. *Dry past.—Red speckled with wh.*

** *Fl. solitary or loosely panicled.*

3. † **D. plumarius.** Pet. downy, cut ¼ way down into many segm.; st. 2-5-fld. P. 6. *Old walls!—Pk. or wh.*
4. † **D. caryophyllus.** Pet. *glabrous*, toothed or fringed: bracts of cal. ¼ length of tube. P. 7-8. *Old walls!—Pk.*
5. **D. cæsius.** Pet. crenate, *bearded*; st. 1-fld.; bracts of cal. ¼ length of tube. P. 6.7. *Calc. rocks.!—Pale rose.*
6. **D. deltoides.** Pet. triangularly-toothed; bracts of cal. 2 (rarely 4) awned, ½ length of tube. P. 7-10. *Hilly past.—Pale rose.*

69. Saponaria. Soap-wort.

1. **S. officinalis.** L. ov. or elliptic, 3-5 ribbed, glabrous; fl. in corymbs or bundles. P. 8-9. *Hedg.—Flesh.*

70. Cucu'balus. Berry Chickweed.

1. † **C. baccifer.** L. ov., acute. P. 7-8. *Dit.!—Wh.*

71. Sile'ne. Catchfly.

* *St. very short, densely tufted; fl. solitary.*

1. **S. acaulis.** L. linear; pet. crowned, notched. P. 6-7. *Mtns.—Rose.*

** *Cal. inflated, netted with veins, glabrous.*

2. S. inflata. L. ov. or ov.-lanc.; pan. many-fld.; fl. mostly drooping; pet. not crowned. P. 6-8. *Fds.—Wh.*
3. S. maritima. L. lanc.; st. decumbent; fl. erect, few or solitary; pet. crowned. P. 6-8. *Sea sh.—Wh.*

*** *Fl. in dense corymbs, or corymbose pan.*

4. † S. Armeria. L. cordate-ov. or ov.-lanc. A. 7-8. *Corn-fds.*!—*Rose.*

**** *St. forked; fl. solitary, one in each fork, or term.; pl. sometimes not forked, and only* 1-2-*fld.*

5. S. noctiflora. Cal. 10-ribbed; root-L. obovate. A. 7. *San. fds.*!—*Pky. wh.*
6. S. conica. Cal. 25-30 ribbed, broadest at base; lower L. ov. or ov.-lanc. upper lanc. A. 5-7. *San. fds.*!—*Red.*

***** *Fl. axillar, solitary, forming a lax raceme.*

7. S. anglica. Pet. wh.; st. simple or branched. A. 6-7. *Cult. fds.*
8. S. quinquevulnera. Pet. each with a large crimson spot; st. simple. A. 6-7. *Ch. Is.*!

****** *Fl. in a term. pan., with whorled or opp. branches.*

9. S. Otites. Fl. erect; cal. glabrous; pet. entire, not crowned. P. 6-7. *San. fds.*!—*Yellowish.*
10. S. nutans. Fl. drooping; cal. hairy; pet. deeply cleft, crowned. P. 6-7. *Calc. rocks*!—*Wh.*

72. LYCH'NIS. Campion.

* *Pet. not crowned; L. linear-lanc.*

1. L. Githago. Cal. teeth extending much beyond pet.; fl. solitary; L. hairy. A. 6-7. *Cornfds.—Purp.*—Corn Cockle.
2. L. alpina. Cal. shorter than pet.; fl. in compact corymbs; L. glabrous; pet. 2-fid. P. 6-7. *Mtns*!—*Rose.*

** *Pet. crowned; fl. diœcious.*

3. L. vespertina. L. ov.-lanc.; caps. ov.; fl. wh. B. 6-9. *Corn-fds.*
4. L. diurna. L. ov.; caps. globose; fl. red or pk. B. 5-6. *Wds.*

*** *Pet. crowned; fl. hermaphrodite; L. lanc.*

5. L. viscaria. Pet. slightly notched; caps. 5-celled below; st. viscid above. P. 5-6. *Mtn. rocks*!—*Rose.*
6. L. Flos-cuculi. Pet. deeply 4-fid; segm. linear; caps. 1-celled. P. 5-7. *Mar.—Rose.*—Ragged Robin.

73. HONCKE'NEYA. Sea Purslane.

1. H. peploides. L. ov., sess.; st. forked, procumbent. P. 6-7. *San. Co.—Wh.*

74. CHERLE'RIA. Mossy Cyphel.

1. **C. sedoides.** St. many, matted and tufted; L. fringed. **P.** 7. *Sco. Alps.—Yellowish gr.*

75. MŒHRIN'GIA. Mœhringia.

1. **M. trinervis.** Sep. longer than pet.; L. ov. **A.** 5-6. *Bks., etc. —Wh.*

76. ARENA'RIA. Sand-wort.

1. **A. serpyllifolia.** Sep. longer than pet.; L. ov., acute. **A.** 6-8. *Walls and dry pl.—Wh.*
2. **A. ciliata.** Sep. lanc., ½ as long as pet.; L. spathulate, fringed. **P.** 6-7. *Ir. mtns.!—Wh.*
3. **A. norvegica.** Sep. ov., ½ as long as pet.; L. spathulate, fleshy. **P.** 7. *Shetland!—Wh.*

77. ALSI'NE. Sand-wort.

* *L. with membranous stip.*

1. **A. marina.** L. linear, fleshy, scarcely pointed; seeds roundish, generally with a winged border; ped. much longer than caps. **A.** 6-8. *Sea Co.—Pale purp.*
2. **A. rubra.** L. linear, flat, bristle pointed; seeds pear-shaped, not bordered; ped. scarcely longer than caps. **A.** 6-8. *San. pl.—Pale purp.*

** *Stip.* 0; *pet. shorter than cal.*

3. **A. rubella.** Ped. solitary, 1-fid.; sep. ov.-lanc.; L. obtuse. **P.** 6-8. *Sco. Alps!—Redish.*
4. **A. tenuifolia.** Fl. many, panicled; sep. lanc.-subulate; L. acute. **A.** 6. *Dry san. pl.—Wh.*

*** *Stip.* 0; *pet. equal to, or longer than sep.*

5. **A. verna.** L. generally acute, 3-nerved; st. 1-many-fid.; sep. lanc.-acuminate. **P.** 5-9. *Hills and mtns.—Wh.*
6. **A. stricta.** L. subulate, obtuse, nerveless; st. 1-3-fid.; sep. ov., acute. **P.** 6. *Moors in N.!—Wh.*

78. HOLOS'TEUM. Jagged Chickweed.

1. **H. umbellatum.** Fl. in umb.; ped. reflexed in fr.; L. ov., acute. **A.** 4. *Old walls!—Wh.*

79. STELLA'RIA. Stitch-wort.

* *L. cordate or ov.*

1. **S. media.** Stam. 3-10; L. ov., mostly stalked; pet. not longer than sep.; st. with an alt. hairy line. **A.** 1-12. *Waste and cult. grd.—Wh.*

2. **S. nemorum.** Stam. 10; L. large, lower cordate, upper ov.; pet. much longer than sep.; st. downy all round above. **P.** 5-6. *Woods in N.—Wh.*

** *L. narrower than ov.; st. terete.*

3. **S. cerastoides.** St. prostrate, usually 2-3-fld; L. oval-oblong, glabrous. **P.** 7-8. *Mtns.—Wh.*

*** *L. lanc. or linear-lanc.; st. 4-angled; pet. much longer than cal.*

4. **S. Holostea.** Edges of st. and L. rough; sep. scarcely nerved; bracts leafy. **P.** 4-6. *Hedg.—Wh.*
5. **S. glauca.** Edges of st. and L. smooth; sep. 3-nerved; bracts membranous at edge. **P.** 6-7. *Mar. pl.—Wh.*

**** *L. narrow; st. 4-angled; pet. shorter or scarcely longer than cal.*

6. **S. graminea.** Pet. about as long as sep.; bracts fringed; L. linear-lanc. **P.** 5-8. *Dry bushy pl.—Wh.*
7. **S. uliginosa.** Pet. shorter than cal.; bracts not fringed; fl. in small axillar pan.; L. ov.-lanc. **A.** 5-6. *Wet pl.—Wh.*

80. SAGI'NA. Pearl-wort.

* *L. bristle-tipped.*

1. **S. procumbens.** Branches procumbent; sep. obtuse. **P.** 5-8. *Dry bks.—Wh.*
2. **S. ciliata.** Erect or procumbent; sep. pointed, erect in fr. **A.** 5-8. *Dry pl.—Wh.*

** *L. not bristle-tipped, obtuse or apiculate.*

3. **S. apetala.** Erect or procumbent; ped. and sep. more or less glandular-hairy; sep. obtuse, spreading in fr. **A.** 5-8. *Walls, etc.*
4. **S. maritima.** Erect or ascending, glabrous. **A.** 5-9. *Sea sh.*

81. MÆNCH'IA.

1. **M. erecta.** Erect; L. opp., linear-lanc.; sep. acute. **A.** 5-6. *Dry grav. pl.—Wh.*

82. SPER'GULA. Spurrey.

* *With membranous stip.; st. erect or ascending.*

1. **S. arvensis.** L. linear, whorled; ped. reflexed in fr. **A.** 6-7. *San. corn-fds.—Wh.*

** *Stip.* 0; *st. procumbent or ascending.*

2. **S. nivalis.** St. and branches tufted, erect or ascending; ped. short, straight; L. subulate, not clustered, mucronate; sep. obtuse, erect in fr.; pet. rather longer than sep. **P.** 6-8. *Sco. Alps.*!—*Wh.*

3. **S. saxatilis.** St. procumbent; ped. long; L. linear, glabrous; sep. obtuse, erect; ped. and sep. glabrous; pet shorter than sep. **P.** 6-8. *Sco. mtns.—Wh.*
4. **S. subulata.** St. procumbent; ped. and sep. glandular-hairy; L. linear, awned; pet. equal to sep. **P.** 7-8. *San. pl.—Wh.*
5. **S. nodosa.** Pet. longer than cal.; L. opp., subulate, glabrous; upper L. short, tufted. **P.** 7-8. *Bogs and wet pl.—Wh.*

83. MALA'CHIUM. Water-chickweed.

1. **M. aquaticum.** L. cordate-ov., sessile, lowest stalked; st. glandular-hairy. **P.** 7-9. *Dit.—Wh.*

84. CERAS'TIUM. Mouse-ear Chickweed.

* *Pet. longer than cal.*

1. **C. latifolium.** L. varying from orbicular to lanc., with short stiff hairs. **P.** 6-7. *Mtns.—Wh.*
2. **C. alpinum.** L. varying from orbicular to lanc., with long silky hairs. **P.** 6-7. *Mtns.—Wh.*
3. **C. arvense.** L. linear-lanc. **P.** 4-8. *Dry bks.—Wh.*

** *Pet. about equal to cal.; stam.* 10.

4. **C. glomeratum.** St. erect or ascending; L. ov.; fl. closely clustered; ped. shorter than fl. **A.** 4-9. *Bks., walls., etc.—Wh.*
5. **C. triviale.** St. procumbent or ascending; L. oblong-lanc.; fl. in small term. pan.; ped. as long or longer than fl. **A.** 4-9. *Fds.—Wh.*

*** *Pet. shorter than cal.; stam.* 4 *or* 5.

6. **C. semidecandrum.** Stam. 5; L. ov. **A.** 4-5. *Dry pl.—Wh.*
7. **C. tetrandrum.** Stam. 4; pet. 4; L. oval. **A.** 5-6. *Dry pl.—Wh.*

ORDER 15.—LINACEÆ.

85. LI'NUM. Flax.

* *Fl. white; L. opp.*

1. **L. catharticum.** L. ov.-lanc.; st. repeatedly forked. **A.** 6-8. *Dry past.*

** *Fl. blue; L. alt. or irregular.*

2. † **L. usitatissimum.** St. single; L. lanc.; sep. ov., acute, fringed. **A.** 7. *Fds.*
3. **L. angustifolium.** St. several or branched; L. linear-lanc.; sep. elliptic, acuminate, fringed. **P.** 7. *Dry past.*
4. **L. perenne.** St. several together; L. linear-lanc.; sep. obtuse, obovate. **P.** 7. *Chalky past.*

86. RADI'OLA. All-seed.

1. **R. millegrana.** St. repeatedly forked, 1-2 inches high; L. ov., sess., opp. **A.** 7-8. *Hea.—Wh.*

ORDER 16.—MALVACEÆ.

87. MAL'VA. Mallow.

* *Fl. stalked.*

1. **M. moschata.** St.-L. deeply cut into pinnatifid lobes, segm. linear; fl. large. **P.** 7-8. *Wds. and past.—Rose.*
2. **M. sylvestris.** L. roundish-reniform, 5-7-lobed, lobes crenate; ped. erect in fr.; fl. large. **P.** 6-9. *Hedg.—Purp.*
3. **M. rotundifolia.** L. roundish-cordate, slightly 5-lobed, lobes crenate; ped. deflexed in fr.; fl. smaller. **P.** 6-9. *Ro. si., etc. —Pale lilac.*

** *Fl. sessile or very nearly so.*

4. † **M. verticillata.** St. erect; L. reniform-cordate, crenate-serrate, angularly lobed; carp. rounded on back, so as to give the fr. a crenate outline. **A.** 6-7. *Corn-fds.* !—*Whitish.*

88. LAVATE'RA. Tree Mallow.

1. **L. arborea.** L. 7-angled, plaited; fl. large. **B.** 7-9. *By sea.* !—*Purp.-rose.*

89. ALTHÆ'A. Marsh Mallow.

1. **A. officinalis.** L. velvety; ped. many-fld. **P.** 7-9. *Salt mar.—Pale rose.*
2. † **A. hirsuta.** L. rough, hairy; ped. 1-fld. **A.** 6-7. *Kent.* !—*Pale purp.*

ORDER 17.—TILIACEÆ.

90. TIL'IA. Lime-tree.

* *Ped. 3-fld.*

1. † **T. grandifolia.** L. cordate, longer than petiole; fr. turbinate, 5-angled, downy. **T.** 8. *Wds. and hedg.—Yellowish.*

** *Ped. many-fld.*

2. **T. parvifolia.** L. roundish-cordate, not longer than petiole; fr. roundish-angular, glabrous. **T.** 7. *Wds. and hedg.—Yellowish.*
3. † **T. Europæa.** L. cordate, twice as long as petiole; fr. nearly glabrous, leathery. **T.** 7. *Wds. and hedg.—Yellowish.*

Order 18.—HYPERICACEÆ.

91. Hyper'icum. St. John's-wort.

* *Styles* 5.

1. † **H. calycinum.** Fl. solitary, large. Sh. 7-8. *Bushy pl.*!—*Yell.*

** *Styles* 3; *sep. broad, unequal; L. cordate-ov., sessile*; *cymes few-fld.*

2. **H. Androsæmum.** Stam. much longer than styles. Sh. 7. *Bushy pl.—Yell.*
3. **H. anglicum.** Stam. shorter than styles; ped. winged. Sh. 5-9. *Irel.*!—*Yell.*

*** *Styles* 3, *sep. nearly equal; st. more or less* 2-4 *edged.*

4. **H. quadrangulum.** St. square, edges winged; sep. erect, lanc., acute; L. ov. or elliptic, with pellucid dots. P. 7-9. *Damp pl.—Yell.*
5. **H. dubium.** St. 4-angled, not winged; sep. oval, or ov.-lanc. obtuse, reflexed; L. elliptic, with pellucid veins but few dots. P. 7-8. *Wds. and damp pl.—Yell.*
6. **H. undulatum.** St. 4-edged, not winged; sep. ov.-lanc., erect, acute; L. oblong, wavy at edge, with many pellucid dots and veins. P. 7-8. *S. W. Eng.*!—*Reddish Yell.*
7. **H. perforatum.** St. 2-angled, not winged; L. varying from ov. to linear, with many pellucid dots; sep. erect. P. 7-8. *Wds. and Hedg.—Yell.*

H. humifusum. (8). St. wiry, prostrate, sometimes slightly 2-edged.

**** *Styles and sep. as last*; *st. terete, prostrate.*

8. **H. humifusum.** L. elliptic, glabrous. P. 7-8. *Hea., etc.—Yell.*

***** *Styles and sep. as last*; *st. terete, erect or ascending, hairy.*

9. **H. Elodes.** L. roundish-ov., hairy; sep. ov., obtuse. P. 7-8. *Bogs.—Yell.*
10. **H. hirsutum.** L. ov. or oblong, hairy; sep. lanc., acute; st. erect. P. 7-8. *Thickets.—Yell.*

****** *Styles and sep. as last*; *st. terete, ascending or erect, glabrous.*

11. **H. linariifolium.** L. linear, margins revolute; sep. lanc. P. 7-8. *S. Eng. and Ch. Is.*!—*Yell.*
12. **H. montanum.** L. ov.; sep. lanc. P. 7. *Hilly thickets.—Yell*
13. **H. pulchrum.** L. cordate, sess., clasping; sep. ov. P. *Hea. and bks.—Deep yell.*

ORDER 19.—ACERACEÆ.

92. A'CER. Maple, etc.

1. **A. campestre.** L. 5-lobed, lobes entire or nearly so; fl. erect, in corymbose rac. T. 5-6. *Hedg., etc.—Gr.*—Maple.
2. † **A. pseudo-platanus.** L. 5-lobed, serrate; fl. in drooping rac. T. 5-6. *Woods, etc.—Gr.*—Sycamore.

ORDER 20.—GERANIACEÆ.

93. ERO'DIUM. Stork's Bill.

1. **E. maritimum.** L. cordate-ov., toothed or lobed; ped. 1-2-fld.; pet. minute, often 0. P. 5-9. *Near sea!—Red.*
2. **E. moschatum.** L. pinnate; lts. ov., irregularly cut; ped. with several fl.; stip. ov. A. 6-7. *Past.—Rose.*
3. **E. cicutarium.** L. pinnate; lts. pinnatifid; ped. with several fl.; stip. lanc. A. 4-8. *Bks., etc.—Rose.*

94. GERA'NIUM. Cranesbill.

* *Ped. 1-fld.*

1. **G. sanguineum.** Fl. large; L. deeply 5-7-fid; lobes 3-5-fid; st. spreading. P. 6-8. *Rocks or san. pl.—Purp.-red.*

** *Ped. 2-fld.; sep. awned; pet. about as long as cal.; L. 5-7-lobed.*

2. **G. dissectum.** Pet. cleft; lobes of L. cut into linear segm.; ped. short. A. 5-9. *Fds., etc.—Rose.*
3. **G. columbinum.** Pet notched, with a tooth in the notch, claws ciliate; lobes of L. cut into linear segm.; ped. very long. A. 6-7. *Grav. soil.—Purp.-rose.*
4. **G. rotundifolium.** Pet. entire; pl. downy. A. 6-7. *Waste pl. —Rose.*

*** *Ped. 2-fld.; sep. awned; pet. considerably longer than sep.*

5. **G. Robertianum.** L. ternate; lts. pinnatifid or bipinnatifid; pet. entire or nearly so. A. 5-10. *Hedg., etc.—Rose.*—Herb Robert.
6. **G. sylvaticum.** L. deeply 3-7 lobed, lobes deeply cut and serrate; st. erect; pet. notched; fl. large; ped. erect in fr. P. 6-7. *Wds., etc.—Purp.-blue or paler.*
7. **G. pratense.** L. deeply 5-7 lobed, lobes cut and serrate; pet. entire; fl. large; base of fil. enlarged and broad; ped. more or less deflexed in fr. P. 6-8. *Mead., etc.—Blue.*

**** *Ped. 2-fld.; sep. obtuse or mucronate, not awned; pet. entire.*

8. **G. phæum.** St. erect; L. 5-lobed, lobes cut and serrate. P. 5-6. *Wds., etc.!—Blackish purp.*

9. G. lucidum. St. spreading or erect; L. reniform, glabrous, shining, 5-lobed, lobes deeply crenate; cal. 5-angled, pyramidal, wrinkled. A. 5-9. *Rocks and Walls.—Rose.*

***** *Ped. 2-fld.; sep. mucronate, not awned; pet. notched or cleft; L. roundish, lobed and cleft.*

10. G. pyrenaicum. St. erect; fl. rather large. P. 6-7. *Hedg., etc.—Purp.-red.*
11. G. pusillum. St. prostrate or spreading; carp. smooth with adpressed hairs; anthers 5. A. 6-9. *Waste pl.—Purp.*
12. G. molle. St. prostrate or spreading; carp. wrinkled, hairless; anthers 10. A. 5-8. *Dry pl.—Rose.*

Order 21.—BALSAMINACEÆ.

95. Impa'tiens. Balsam.

1. I. Noli-me-tangere. Spur not notched; ped. many-fld., 1 or 2 fl. larger, the rest small; L. ov., serrate. A. 7-8. *Wet sha. pl —Yell.*
2. † I. fulva. Spur notched; ped. about 4-fld.; L. ov., serrate. A. 8. *By riv.—Orange.*

Order 22.—OXALIDACEÆ.

96. Ox'alis. Wood Sorrel.

1. O. acetosella. Stemless; rhizome bulbous-scaly; scape 1-fld. P. 4-5. *Woods, etc —Wh.*
2. O. corniculata. St. branched, spreading or prócumbent; stip. oblong, ped. axillar, 2-4-fld.; fl. small; pet. notched. A. 5-10. *Waste grd., S. Eng —Yell.*
3. † O. stricta. St. erect; stip. 0; ped. 2-8-fld.; pet. entire. B. 7-8. *Cult. grd.—Yell.*

Order 23.—CELASTRACEÆ.

97. Staphyle'a. Bladder-nut.

1. † S. pinnata. Fl. in rac; L. pinnate; lts. ov. or lanc. Sh. 6. *Hedg. !—Yellowish.*

98. Euo'nymus. Spindle-tree.

1. E. Europæus. Branches 4-angled; L. simple, ov.-lanc., serrate; caps. 4-angled. Sh. 5. *Hedg. and woods.—Gr.*

ORDER 24.—RHAMNACEÆ.

99. RHAM'NUS. Buckthorn.

1. **R. catharticus.** Branches thorny; stam. 4; fl. dicœcious; L. oval, serrate. **Sh. or T.** 5-6. *Hedg., etc —Gr.*
2. **R. Frangula.** Thornless, stam. 5; fl. hermaphrodite; L. elliptic, entire. **Sh.** 5-6. *Thickets.—Gr. IVh.*

ORDER 25.—LEGUMINOSÆ.

100. ANTHYL'LIS. Ladies' Finger Vetch.

1. **A. vulneraria.** Heads in pairs, bracteated. **P.** 6-9. *Calc. past. —Yell., rarely red.*

101. ONO'NIS. Rest-harrow.

1. **O. arvensis.** St. thornless; pods ov., erect, shorter than cal.; L. ternate, upper simple. **P.** 6-9. *Bks., etc.—Rose.*
2. **O. campestris.** St. thorny; pod. ov., erect, longer than cal.; L. ternate, upper simple. **P.** 6-9. *Bar. pl.—Rose.*
3. **O. reclinata.** St. viscid, hairy, not thorny; cal. as long as cor.; L. all ternate, pod cylind., reflexed, 10-18 seeded. **A.** 7. *San. pl.!—Purplish.*

102. U'LEX. Furze.

1. **U. Europæus.** Cal. downy, with 2 ov. bracts at base; branches spreading; fl. term. and lateral. **Sh.** 1-5. *Hea.—Yell.*
2. **U. strictus.** Branches erect; fl. term. **Sh.** 4. *Irel.!—Yell.*
3. **U. nanus.** Cal. nearly glabrous, with 2 very minute bracts; branches procumbent. **Sh.** 8-10. *Hea.—Yell.*

103. GENIS'TA. Dyer's Weed.

1. **G. anglica.** Thorny; L. ov. or ov.-lanc.; pods inflated. **Sh.** 5-6. *Moist hea.—Yell.*
2. **G. pilosa.** Thornless; st. procumbent; L. obovate-lanc., obtuse, silky beneath; fl. clustered; pet., sep., and pod silky or hairy. **Sh.** 5-9. *Dry hea.!—Yell.*
3. **G. tinctoria.** Thornless; st. decumbent, branches ascending; L. lanc., rarely ov., glabrous; pod glabrous; fl. in rac. **Sh.** 7-8. *Past.—Yell.*

104. SAROTHAM'NUS. Broom.

1. **S. scoparius.** Fl. large, axillar, 1 or 2 together. **Sh.** 5-6. *San. past.—Yell.*

105. MELIL'OTUS. Melilot.

* *Fl. yellow.*

1. **M. officinalis.** Pod irregularly wrinkled, ov., acute, hairy, 2-seeded, wings equal to standard and keel. **B.** 6-8. *Past.*

2. **M. arvensis.** Pod transversely wrinkled, oval, glabrous, obtuse, 1-seeded, wings and standard longer than keel. **B.** 6-8. *Past.*

** *Fl. white.*

3. **M. vulgaris.** Pod 1-seeded, glabrous, oval. **B.** 7-8. *Near sea.*

106. TRIFO'LIUM. Trefoil.

* *Cal. inflated in fr.; st. creeping.*

1. **T. fragiferum.** Heads in fr. globose, on long ped.; stip. ov. with a long point; fl. with an inv. of bracts as long as cal. **P.** 7-9. *Past.—Pale red.*
2. † **T. resupinatum.** Heads in fr. roundish on short ped.; stip. linear-lanc.; bracts minute. **A.** 7. *Mead.!—Pale red.*

** *Cal. not inflated in fr.; seeds 2 in each pod; heads of fl. sess.; st. prostrate.*

3. **T. glomeratum.** Cal.-teeth broad, short, recurved in fr. **A.** 6. *Dry past. near sea.—Rose.*
4. **T. suffocatum.** Cal.-teeth lanc., reflexed; heads crowded near root. **A.** 6. *San. pl. near sea.!—Pk. or wh.*

*** *Cal. not inflated in fr.; seeds 2-4 in each pod; heads of fl. stalked.*

5. **T. repens.** Pod 2-4-seeded; st. hollow, creeping; lts. obovate or obcordate. **P.** 5-9. *Past.—White or reddish.*—White Clover.
6. **T. strictum.** Pod 2-seeded; st. erect; lts. oblong. **A.** 8. *S. Eng. and Ch. Is.!—Reddish.*

**** *Seeds 1 in each pod; fl. yell., deflexed in fr.; cor. persistent.*

7. **T. procumbens.** Heads 30-50-fld.; standard (in fr.) brown, distinctly furrowed. **A.** 6-8. *Dry pl.—Yell.*—Hop Trefoil.
8. **T. minus.** Heads small, 8-20-fld.; standard obtuse, faintly furrowed in fr.; ped. much shorter than cal.-tube. **A.** 6-8. *Dry pl.—Yell.*
9. **T. filiforme.** Heads 2-5-fld.; standard not furrowed, notched; ped. as long as cal.-tube. **A.** 6-8. *Dry pl.—Yell.*

***** *Seeds 1 in each pod; fl. red, wh., or crm.-coloured.*

† *Fl. 2-5 in each head.*

10. **T. subterraneum.** Cor. much longer than cal.; heads with a central starry fibrous tuft, at length deflexed over fr.; st. prostrate. **A.** 5. *Dry pl.—Wh.*

†† *Heads many-fld.; cal. considerably longer than cor.*

11. **T. arvense.** Heads oval or oblong (rarely roundish); teeth of cal. bristle-shaped; lts. narrow-oblong. **A.** 7-8. *Corn-fds.—Whitish.*

††† *Heads many-fld.; cal. about equal to cor.; teeth spreading in fr.*

12. T. stellatum. Cal.-teeth large, stellate in fr.; heads large, stalked, roundish. **A.** 7-8. *S. Co.*!—*Light Red.*
13. T. scabrum. Cal.-teeth lanc., stiff, spreading or reflexed in fr.; heads ov., sess.; st. prostrate. **A.** 5-7. *Dry pl.—Wh.*

†††† *Heads many-fld.; cal. about equal to cor.; teeth erect in fr.*

14. T. striatum. St. prostrate or ascending; heads ov., sessile; stip. ov., pointed; lts. obovate. **A.** 6-7. *Dry pl.—Wh. or pk.*
15. T. Bocconi. St. erect or ascending; heads oval, sessile, 2 together, term.; stip. oblong, awned; lts. narrow-oblong. **A.** 7. *Dry pl. in S. W. Eng.*!—*Crm.*

††††† *Heads many-fld.; cal. shorter than cor.; stip. broad, ov.; lts. usually ov. or cordate.*

16. T. incarnatum. Heads ov. or cylind., stalked; cal. teeth nearly equal; stip. obtuse. **A.** 6-7. *Mead.*!—*Crims. or Crm.*
17. T. pratense. Heads ov. or globose, sess.; cal. with 1 tooth twice as long as rest; stip. awned. **P.** 6-7. *Mead.—Purp.-red, rarely wh.*—Red clover.

†††††† *Heads many-fld.; cal. shorter than cor.; stip. narrow-lanc., or linear; lts. narrower than ov.*

18. T. ochroleucum. Heads roundish or oval, close; cal. downy, teeth erect in fr., one tooth longer than rest. **P.** 6-7. *Dry pl.—Crm. or yell.*
19. T. medium. Heads roundish, lax; cal. glabrous, one tooth longer than rest. **P.** 6-7. *Dry past.—Purp. red.*—Cow Clover.
20. T. maritimum. Heads roundish, close; cal.-teeth (after flowering) broad, stiff, acute, spreading. **A.** 6-7. *Salt mar. —Pale red.*

107. MEDICA'GO. Medick.

* *Fl. in oval heads; pods reniform, 1-seeded.*

1. M. lupulina. Lts. obovate. **A.** 5-9. *Past, etc.—Yell.*

** *Fl. in many-fld. rac.; pods curved or spiral, 2 or more-seeded, open in centre of spiral.*

2. M. falcata. Pod sickle-shaped; st. decumbent, terete. **P.** 6-7. *San. pl. in E. Eng.*!—*Yell.*
3. M. sylvestris. Pod annular of only 1 turn; st. ascending, somewhat 4-angled. **P.** 6-7. *San. pl. in E. Eng.*!—*Yell. or greenish-purp*
4. † M. sativa. Pod spirally coiled of 2-3 turns. **P.** 6-8. *Fds. —Viol.*—Lucerne.

*** *Ped. 1-or few-fld.; pod spirally coiled into a disk or ball, spiny or tubercled; st. prostrate.*

5. **M.** minima. Coiled pod globose, with 2 rows of short hooked spines; lts. obovate; stip. entire. **A.** 6-7. *Sun. pl.*!—*Yell.*
6. **M.** denticulata. Pod loosely coiled, flattened; spines in 2 rows, hooked (rarely only tubercles); stip. deeply toothed. **A.** 4-7. *Sea Co.*—*Yell.*
7. **M.** maculata. Pod loosely coiled, flattened, reticulated, with 2 rows of curved (not hooked) spines; stip. toothed; lts. obcordate, each with a dark spot. **A.** 5-7. *Dry grav. soil.*—*Yell.*

108. Lo'tus. Bird's-foot Trefoil.

* *Heads umbellate, 3-12-fld. (usually 5 or more).*

1. **L.** corniculatus. St. decumbent, solid; claw of standard broad; umb. 3-10-fld. **P.** 5-9. *Dry past.*—*Yell. or reddish.*
2. **L.** major. St. usually erect, hollow; claw of standard linear; umb. 8-12-fld. **P.** 7-8. *Wet pl.*—*Yell.*

** *Heads 1-4-fld.; fl. small; st. procumbent; lts. ov.*

3. **L.** angustissimus. Stip. ov.-lanc.; ped. 1-2-fld.; pod 6 times as long as cal. **P.** 5-8. *Near sea.*!—*Yell.*
4. **L.** hispidus. Stip. ½ cordate; ped. 3-4-fld.; pod wrinkled, 2-3 times as long as cal. **P.** 5-8. *Near sea.*!—*Yell.*

109. Trigonel'la. Fenugreek.

1. **T.** ornithopodioides. Ped. axillar, 1-3-fld.; st. prostrate. **A.** 6-7. *Dry pl.*—*Yell. or reddish.*

110. Onobry'chis. Saintfoin.

1. **O.** sativa. Fl. in close axillar rac., on long ped. **P.** 6.7. *Calc. past.*—*Rose.*

111. Astrag'alus. Milk Vetch.

* *Stip. united into* 1 *L., opp. the pinnate L.*

1. **A.** hypoglottis. Fl. in a roundish stalked head; fl. ascending; pods erect; lts. 8-10 pairs. **P.** 6-7. *Dry past.*—*Purp.*

** *Stip.* 2, *free, distinct.*

2. **A.** alpinus. Fl. drooping, in stalked rac.; pods pendulous; lts. 10-12 pairs. **P.** 7. *Sco. mtns.*!—*Purp and wh.*
3. **A.** glycyphyllos. Fl. ascending, in close ov., stalked spikes; lts. 5-6 pairs, large, ov. **P.** 6. *Thickets.*—*Yell.*

112. Oxyt'ropis. Oxytropis.

1. **O.** uralensis. Stemless; lts. ov., acute, silky, about 12 pairs; pod oblong, silky, 2-celled. **P.** 7. *Sco. mtns.*—*Purp.*

2. O. campestris. St. short, procumbent; lts. ov.-lanc., hairy, about 12 pairs; pod ov., hairy, imperfectly 2-celled. P. 7. *Sco. Mtns.* !—*Yellowish.*

113. HIPPOCRE'PIS. Horse-shoe Vetch.

1. H. comosa. Fl. in depressed umb.; st. procumbent; lts. obovate. P. 5-7. *Calc. past.*—*Yell.*

114. ORNI'THOPUS. Bird's Foot.

1. O. perpusillus. St. prostrate; ped. 1-5-fld. A. 5-7. *San. grd.*—*Wh.*

115. ARTHROLO'BIUM. Joint Vetch.

1. A. ebracteatum. St. prostrate; ped. 2-4-fld. A. 6-7. *Ch. Is.*—*Yell.*

116. VIC'IA. Vetch.

* *Fl. axillar, nearly sess., clustered.*

1. V. sepium. Lts. 4-8 pairs, ov., obtuse, mucronate; cal. hairy; clusters 3-6-fld. P. 5-6. *Wds., etc.*—*Dull purp.*

** *Fl. axillar, sessile or nearly so, solitary or in pairs; lts. 1-3 pairs.*

2. V. Bithynica. Lts. 1-2 pairs ov.-lanc, to linear; ped. 1-2-fld.; pod rough; stip. ½-sagittate, toothed. P. 7-8. *Bushy pl.* !—*Purp.*

3. V. lathyroides. Lts. 1-3 pairs; fl. axillar, solitary, small; stip. ½-sagittate, entire. A. 4-5. *Dry pl.* !—*Purp.*

*** *Fl. axillar, solitary or in pairs, sess. or nearly so; lts. 4-8 pairs.*

4. V. lutea. Fl. solitary; pods hairy; cal.-teeth unequal. P. 7-8. *Near sea.* !—*Yell.*

5. V. sativa. Fl. solitary or in pairs; pod glabrous; cal.-teeth equal; stip. often spotted. A. 5-6. *Fds., etc.*—*Crims.*

**** *Ped. long, 1-4-fld.; pod glabrous; lts. linear.*

6. V. tetrasperma. Pod 3-4-seeded; lts. obtuse. A. 6-7. *Corn-fds.*—*Pale blue.*

7. V. gracilis. Pod 6-8-seeded; lts. acute. A. 6-7. *Corn-fds.*—*Pale blue.*

***** *Ped. long, 2-many-fld.; fl. small; pod hairy.*

8. V. hirsuta. Pod 2-seeded; lts. linear. A. 6-8. *Corn-fds.*—*Wh.*

****** *Ped. long, many-fld.; lts. 7 or more pairs.*

9. V. sylvatica. Lts. ov.; L. tendrilled; st. climbing. P. 7-8. *Wds.*—*Crm. with purp. lines.*

10. V. Orobus. Lts. narrow-oblong; tendrils 0; st. ascending. P. 5.6. *Rocky wds.* !—*Crm. with purp. lines.*

11. **V. Cracca.** Lts. lanc.; st. climbing or decumbent; stip. ½-sagittate; fl. numerous, small, pendent. P. 6-8. *Hedg., etc.*—*Blue-purp.*

117. LATH'YRUS. Pea. Vetchling.

* (*Apparent*) *L. undivided.*

1. **L. aphaca.** Tendrils leafless; ped. 1-fld., axillar; stip. leaf-like, sagittate-cordate, large; L. 0. A. 5-8. *San. fds.*!—*Yell.*
2. **L. Nissolia.** Tendrils 0; stip. 0; lts. long, linear; ped. 1-2-fld. A. 5-6. *Mead.*—*Crims.*

** *L. pinnate with* 1 *pair of lts.*; *ped.* 2-*fld.*

3. **L. hirsutus.** Lts. linear-lanc.; pod narrow, hairy. A. 6-7. *Fds.*!—*Blue and crims.*

*** *L. pinnate, with* 1 *pair of lts.*; *ped. more than* 2-*fld.*

4. **L. pratensis.** Lts. lanc.; stip. sagittate. P. 6-8. *Fds.*—*Yell.*
5. **L. sylvestris.** Lts. lanc.; stip. ½-sagittate; st. winged. P. 7-8. *Wds. and hedg.*—*Greenish-bluish-purp.*
6. † **L. latifolius.** Lts. oval; stip. ½-sagittate; st. winged. P. 7-8. *Wds.*!—*Rose.*

**** *L. pinnate, with more than* 1 *pair of lts.*

7. **L. palustris.** St. winged; stip. ½-sagittate, lanc.; lts. narrow-lanc. P. 6-7. *Wet mead.*!—*Bluish-purp.*
8. **L. maritimus.** St. not winged; stip. large, broad, oval, sagittate at base; lts. oval or lanc.; st. prostrate. P. 7-8. *Pebbly sh.*!—*Purp.*

118. OR'OBUS. Bitter Vetch.

1. **O. tuberosus.** Lts. oblong, rarely linear, 2-3 pairs; st. simple, winged, erect; stip. ½-sagittate. P. 6-7. *Wds.*—*Purplish.*
2. **O. niger.** Lts. ov., elliptic, or lanc., 4-6 pairs; st. branched, not winged; stip. linear. Turns black in drying. P. 6-7. *Sco. Wds.*!—*Red and purp.*

ORDER 26.—ROSACEÆ.

119. PRU'NUS. Plum. Sloe.

1. **P. communis.** Ped. 1-2 together, commonly appearing before L. Sh. 3-4. *Hedg.*—*Wh.*
2. **P. Cerasus.** Ped. many in a sess. umb. L. obovate, serrate. Shrub with suckers; fr. red. Sh. 5. *Wds.*—*Wh.*—Cherry.
3. **P. avium.** Ped. many in a sess. umb.; L. obovate, serrate. Tree without suckers; fr. black. T. 5. *Woods and Hedg.*—*Wh.*—Cherry.

4. P. Padus. Fl. in drooping rac. T. 5. *Woods and Hedg.—Wh.*—Bird Cherry.

120. SPIRÆ'A. Meadow Sweet.

1. S. Ulmaria. L. interruptedly pinnate; lts. wh. beneath, ov., irregularly toothed, term. one 3-5 lobed; fl. numerous in a dense cluster. P. 6-8. *Wet pl.—Yellowish wh.*
2. S. Filipendula. L. mostly radical, interruptedly pinnate; lts. 12-20 or more, small, ov. or oblong, deeply toothed; fl. fewer than last. P. 6-7. *Calc. past.—Wh.*
3. † S. salicifolia. Shrubby; stip. 0; L. ov.-lanc., serrate; fl. in crowded rac. Sh. 7. *Moist wds.*!—*Pk.*

121. ALCHEMI'LLA. Ladies' Mantle.

* *L. silky and wh. beneath; lts. serrate at end.*

1. A. alpina. Root-L. digitate, divided to base, lobes 5-7, oblong. P. 6-7. *Sco. mtns.—Gr.*
2. A. conjuncta. Root-L. palmate, cleft ⅔ of the way down, basal lobes nearly or quite touching; lobes 5-7. P. 6-7. *Sco. mtns., etc.*!—*Gr.*

** *L. not silky beneath.*

3. A. vulgaris. L. roundish-reniform, plaited, lobed, serrate, lower on long stalks; fl. panicled. P. 5-8. *Past., etc.—Gr.*
4. A. arvensis. L. 3-fid, toothed, on short stalks; fl. minute, axillar, sess., clustered. A. 4-8. *Fds. and dry pl.—Gr.*

122. SANGUISOR'BA. Great Burnet.

1. S. officinalis. Heads globose, ov., or oblong; lts. cordate-ov. or oblong, 4-6 pairs and a term. one. P. 6-8. *Damp pl.—Deep purp. red.*

123. POTE'RIUM. Lesser Burnet.

1. P. Sanguisorba. Heads globose; F. cal. (in fr.) reticulated, not prickly; lts. ov., toothed, 4-9 pairs and a term. leafl. P. 6-7. *Meads.—Gr.*
2. P. muricatum. Heads globose; F. cal. (in fr.) pitted; margin of pits toothed or prickly; L. as in last species. P. 6-7. *Mead.—Gr.*

124. AGRIMO'NIA. Agrimony.

1. A. Eupatoria. Lts. ov., serrate; spike long. P. 5-7. *Ro. Si. etc.—Yell.*

125. DRY'AS. Mountain Avens.

1. D. octopetala. L. oblong, deeply crenate, wh. beneath. P. 6-7. *Mtns.—Wh.*

126. GE'UM. Avens.

1. **G. urbanum.** Fl. erect; stip. large, broad; root-L. interruptedly pinnate and lyrate; st.-L. ternate. P. 6-8. *Hedg.—Yell.*
2. **G. rivale.** Fl. drooping; stip. small, ov., toothed; root-L. interruptedly pinnate, with small lts., and a large broad term. lobe, sometimes ternate. P. 6-7. *Damp pl.—Purplish.*

127. RU'BUS. Brambles, etc.

In this genus, the number of British species is very variously estimated by different authors, varying from 4 to 40. They are mostly *very difficult* of determination, and can only be recognised with any certainty by a long and laborious study of the genus for many successive seasons. We have, therefore, followed Hooker and Arnott in the following synopsis, these species (in the shrubby Rubi) being considered by others merely as sections, each containing many species.

* *Pl. herbaceous, not woody; stip. ov. or lanc.; pl. with a creeping underground st.*

1. **R. saxatilis.** L. ternate; st. with few, weak, or no prickles; fl. small, few, in a term. corymb. P. 7-8. *Mtn. wds.—Yellowish-wh.*
2. **R. chamæmorus.** L. roundish or reniform, often lobed; fl. solitary. P. 6. *Alp. bogs.—Wh.*—Cloudberry.

** *St. woody, erect; L. pinnate; upper 3-nate, wh. beneath.*

3. **R. idæus.** Prickles weak; fl. panicled. P. 6. *Bks. and wds.—Wh.*—Raspberry.

*** *L. quinate (rarely pinnate), not wh. beneath, upper often ternate.*

4. **R. suberectus.** St. erect or nearly so, not arching, nearly glabrous; prickles chiefly confined to the angles of st. Sh. 5-8. *Boggy pl.!—Wh. or pk.*
5. **R. rhamnifolius.** St. arching (not erect), nearly glabrous; prickles only on angles of st., uniform; without glandular hairs. Sh. 7-8. *Thickets.—Wh. or pk.*
6. **R. carpinifolius.** St. arching (not erect), hairy, prickles only on angles of st., uniform; without glandular hairs. Sh. 7-8. *Thickets, etc.—Wh. or pk.*
7. **R. corylifolius.** St. arching (not erect), nearly glabrous, prickles scattered, nearly equal; no aciculi or glandular hairs. Sh. 7-8. *Thickets.—Wh. or pk.*
8. **R. glandulosus.** St. arched or prostrate, hairy, prickles scattered, unequal, with many aciculi and glandular hairs. Sh. 7-8. *Thickets.—Wh. or pk.*

9. **R. cæsius.** St. arched or prostrate, terete, more or less glaucous; prickles weak, scattered, not numerous; glandular hairs few or 0; sep. (in fr.) erect and embracing the fr.; L. mostly ternate. **Sh.** 6-7. *Thick.—Wh.*

******** *L. usually quinate, never pinnate, rarely* 3*-nate, wh. beneath.*

10. **R. fruticosus.** St. arched; hairs 0; prickles strong, hooked, confined to the angles of the st.. **Sh.** 7-8. *Thickets and hedg.—Pk.*

128. FRÆGA'RIA. Strawberry.

1. **F. vesca.** Hairs of pedicels (not peduncles) adpressed. **P.** 5-6. *Wds.—Wh.*
2. **F. elatior.** Hairs of pedicels and peduncles spreading. **P.** 5-8. *Thickets.!—Yell.*

129. COʹMARUM. Marsh Cinquefoil.

1. **C. palustre.** Lower L. pinnate, upper quinate or ternate; lts. lanc., serrate, st. ascending. **P.** 6-7. *Bogs.—Purp.*

130. POTENTIL'LA. Cinquefoil.

* *L. pinnate.*

1. **P. anserina.** Root-L. interruptedly pinnate, silky beneath; st. creeping; ped. axillar, 1-fld. **P.** 6-7. *Waste grd.—Yell.*
2. **P. rupestris.** Lower L. pinnate, upper 3-nate; lts. obovate, serrate. **P.** 6. *Welch mtns.!—Wh.*
3. **P. fruticosa.** Lts. about 5, oblong-lanc., entire; shrubby. **Sh.** 6-7. *Mtn. pl.!—Yell.*

** *L. all ternate; fl. white.*

4. **P. Fragariastrum.** Lts. hairy-silky, obovate, serrate. **P.** 3-5. *Bks.—Wh.*

*** *L. ternate or quinate; fl. yell.; lts. silky beneath.*

5. **P. argentea.** Lts. cuneate, toothed; fl. in a lax corymb. **P.** 6-7. *Grav. pl.*

**** *L. ternate or quinate; fl. yell.; lts. not silky beneath.*

6. **P. Tormentilla.** Pet. 4, rarely 5; L. ternate, lowest only quinate; stip. mostly cut; st. procumbent or ascending. **P.** 6-9. *Past., hea., etc.*
7. **P. reptans.** Pet. 5; L. nearly all quinate; stip. ov., mostly entire; st. prostrate, rooting. **P.** 6-9. *Waste pl.*
8. **P. alpestris.** Pet. 5; st. ascending; lts. 3-5, cuneate, hairy, cut; stip. all ov. **P.** 6-7. *Mtns.*
9. **P. verna.** Pet. 5; st. short, tufted, branches prostrate, sometimes decumbent; lts. 5-7, obovate-cuneate, toothed chiefly at end; lower stip. linear. **P.** 4-5. *High dry past.*

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131. SIBBAL'DIA. Sibbaldia.

1. **S. procumbens.** St. short, tufted; L. ternate. P. 7. *Sco. mtns.—Yell.*

132. RO'SA. Rose.

The observations in the genus Rubus (127) apply to some extent here also. It is a difficult genus. The characters of the prickles should be taken from a vigorous shoot which has not yet borne flowers.

* *Prickles of the shoot various in size, intermixed with bristles and glandular hairs; fr. smooth; L. without glands.*

1. **R. spinosissima.** Shoots crowded with prickles and bristles; sep. entire; fr. globose, black when ripe; lts. small. Sh. 5-7. *Dry pl.—Wh.*
2. **R. Wilsoni.** Shoots crowded with prickles; sep. nearly entire; fr. urn-shaped, scarlet when ripe; lts. hairy. Sh. 6. *Wales.*
* —*Pk.*
3. **R. Hibernica.** Shoots with distant prickles, the larger somewhat hooked; fr. somewhat urn-shaped, scarlet when ripe; lts. hairy beneath. Sh. 5-10. *Irel.* !—*Pk.*

** *Prickles of the shoot various in size, intermixed with bristles and glandular hairs; fr. bristly; L. glandular beneath or at edge.*

4. **R. involuta.** Prickles crowded; L. hairy beneath; pet. involute, Sh. 6. *Sco. and N. Eng.—Pale red.*
5. **R. Sabini.** Prickles distant; L. nearly glabrous. Sh. 6-7. *Thickets.—Pale red.*

** *Prickles of the shoot various in size, intermixed with some glandular hairs; L. densely glandular beneath.*

6. **R. rubiginosa.** Bristles both straight and hooked. Sh. 6-7. *Hedg.—Pk.*—Sweet Briar.

**** *Prickles uniform or nearly so, glandular hairs few or 0; L. more or less glandular beneath and at edge; fr. bristly; sep. mostly pinnate.*

7. **R. micrantha.** Prickles hooked; L. very glandular beneath. Sh. 6-7. *Hedg.—Pk.*
8. **R. tomentosa.** Prickles nearly straight; L. hairy beneath. Sh. 6-7. *Hedg. and thickets.—Red or pk.*

***** *Prickles and st. as last; L. more or less glandular beneath; fr. smooth.*

9. **R. inodora.** Prickles all hooked; fr. oval or globose. Sh. 6-7. *Hedg. and thickets.—Pale pk.*

10. R. sepium. Larger prickles hooked, smaller straight; fr. ov. Sh. 6. *Hedg.*!—*Pk.*

****** *Prickles uniform, hooked; st. never bristly or glandular; L. never glandular beneath.*

11. R. canina. Styles distinct, one from each carpel; L. mostly glabrous, rarely hairy. Sh. 6-7. *Hedg.—Pk. or wh.*—Dog Rose.
12. R. arvensis. Styles united into a column; shoots trailing; prickles usually feeble. Sh. 6-7. *Hedg.—Wh.*
13. R. systyla. Styles united into a column; shoots strong, ascending; prickles stout, hooked. Sh. 6-7. *Hedg. and thickets.—Pk. or wh.*

133. MES'PILUS. Medlar.

1. M. germanica. Branches usually thorny; fl. solitary, term., nearly sess.; L. lanc. T. 5. *Hedg.—Wh.*

134. CRATÆ'GUS. Hawthorn.

1. C. Oxyacantha. Thorny; L. lobed, 3-5-fid. Sh. or T. 5. *Hedg.—Wh.*

135. COTONEAS'TER. Cotoneaster.

1. C. vulgaris. L. oval or roundish; fl. pendulous. Sh. 5. *Cliffs.*!—*Rose.*

136. PY'RUS.

* *L. pinnate.*

1. P. aucuparia. Fl. in a corymb; lts. oblong, serrate, downy beneath when young, glabrous when old; fr. small, globose. T. 5-6. *Wds.—Wh.*—Mountain Ash.
2. P. domestica. Fl. in a pan.; lts. downy beneath; fr. larger, pear-shaped. T. 5. *Wds.*!—*Wh.*—True Service Tree.

** *L. decidedly lobed; fl. in corymbs.*

3. P. torminalis. L. broad, rounded at base, 7-lobed, lobes angular, serrate, reaching to near middle (L. not unlike the sycamore). T. 4-5. *Wds. and hedg.—Wh.*—Service Tree.
4. P. Scandica. L. ov., lobes deepest in the middle of L.; lateral nerves about 7 on each side. T. 4-5. *Wds.*!—*Wh.*
5. P. Fennica. L. oblong, pinnatifid below, 2 lower lobes mostly distinct. T. 4-5. *Wds.*!—*Wh.*

*** *L. more or less serrate, not distinctly lobed.*

6. P. Aria. L. oval or oblong, large, with about 12 strong nerves on each side, serrate, very white beneath, sometimes slightly lobed towards end; fl. small, corymbose. T. 5. *Rocky wds.—Wh.*—White-beam.

7. P. communis. L. ov. or obovate, serrate; styles distinct; fr. pear-shaped; fl. large, corymbose. T. 4-5. *Woods and hedg.—Wh.*—Pear.
8. P. Malus. L. ov., serrate; styles united below; fr. globose; fl. large, umbellate. T. 4-5. *Wds. and hedg.—Wh. and red.*—Apple.

Order 27.—ONAGRACEÆ.

137. Epilo'bium. Willow-herb.

* *Pet. unequal; stam. and styles bent downwards.*

1. E. angustifolium. L. lanc.; fl. in a term. rac. P. 7-8. *Damp wds.—Rose.*—Rosebay.

** *Pet. equal; stam. and styles erect; stig. 4-fid.; L. hairy or woolly.*

2. E. hirsutum. Fl. large; L. ov.-lanc., serrate, ½-clasping; st. branched. P. 7-8. *Wet pl.—Rose.*
3. E. parviflorum. Fl. small; L. lanc., sess.; st. scarcely branched. P. 7-8. *Wet pl.—Red.*

*** *Pet., stam., and styles as last; stig. 4-fid; L. glabrous.*

4. E. montanum. L. ov. or ov.-lanc.; petioles short. P. 6-7. *Dry shady pl.—Pale purp.*
5. E. lanceolatum. L. lanc., stalked, usually drooping. P. 7-9. *Wds., S. Eng.!—Pale purp.*

**** *Pet. and stam. as last; stig. entire or very little lobed; st. quite terete.*

6. E. palustre. L. narrow-lanc., sess. P. 7-8. *Mar.—Pale purp.*

***** *Pet., stam., and stig. as last; st. with 2-4 raised lines; L. more or less stalked.*

7. E. roseum. St. erect; L. ov. or ov.-lanc.; no suckers. P. 7. *Wet pl.—Pale purp.*
8. E. alsinifolium. L. ov., acute, toothed; root with suckers; st. creeping at base. P. 6-7. *Wet pl. on mtns.—Rose.*
9. E. alpinum. L. elliptic, or oblong-lanc., obtuse, entire or nearly so; root with suckers; st. creeping at base. P. 6-7. *Wet pl. on mtns.—Rose.*

****** *Pet., stam., and stig. as last; st. with 2-4 raised lines; L. all sessile.*

10. E. tetragonum. L. lanc., many decurrent. P. 7-8. *Wet pl.—Pale purp.*
11. E. virgatum. L. lanc., none decurrent. P. 7-8. *Wet pl.—Pale purp.*

138. Æno'thera. Evening Primrose.

1. **Æ. biennis.** L. ov.-lanc.; st. rough; fl. large. B. 7-9. *San. pl.—Yell.*

139. Isnar'dia. Isnardia.

1. **I. palustris.** L. opp., ov., stalked; fl. solitary, axillar. A. 6-7. *Wat pl., S. Eng.—Gr.*

140. Circæ'a. Enchanter's Nightshade.

1. **C. lutetiana.** L. ov. or cordate-ov., downy; cal. hairy. P. 6-8. *Wds.—Reddish-wh.*
2. **C. alpina.** L. cordate, shining; cal. glabrous. P. 6-8. *Mtn. wds.—Reddish-wh.*

Order 28.—HALORAGEACEÆ.

141. Hippu'ris. Mare's Tail.

1. **H. vulgaris.** Fl. axillar; st. erect; upper part above water. P. 5-6. *Dit. and ponds.*

142. Myriophyl'lum. Mill-foil.

* *Spikes leafless; bracts (or upper at least), not longer than fl.*

1. **M. spicatum.** Upper bracts ov., entire, lower often pectinate; fl. whorled; spike erect in bud. P. 6-7. *Ponds and dit.—Reddish.*
2. **M. alterniflorum.** M. fl. about 6, alt.; F. in whorls of 3, below; spike nodding in bud. P. 6-7. *Ponds, etc.*

** *Bracts longer than fl., all pectinate, or spikes leafy.*

3. **M. verticillatum.** Fl. all whorled and axillar. P. 6-7. *Ponds and dit.—Gr.*

Order 29.—LYTHRACEÆ.

143. Lythr'um. Purple Loose-strife.

1. **L. salicaria.** L. opp., or in threes, lanc., sess.; fl. whorled in leafy spikes; stam. mostly 12. P. 7-8. *Wet. pl.—Crims.*
2. **L. hyssopifolium.** L. alt., linear-lanc.; fl. axillar, solitary; stam. 6. P. 8. *Wet pl.!—Pale purp.*

144. Pep'lis. Water Purslane.

1. **P. Portula.** L. opp., obovate, stalked; fl. axillar, solitary. A. 7-8. *Wat. pl.—Reddish.*

Order 30.—TAMARISCACEÆ.

145. Tam'arix. Tamarisk.

1. **T. Gallica.** Spikes small, lateral, cylind. Sh. 7. *E. and S. Co.* !—*Pinky-wh.*

Order 31.—CUCURBITACEÆ.

146. Bryo'nia. Bryony.

1. **B. dioica.** L. palmately 5-lobed. P. 5-9. *Hedg.—Straw.*

Order 32.—PORTULACACEÆ.

147. Mon'tia. Blinks.

1. **M. fontana.** L. spathulate; fl. small, axillar; pl. tufted. A. 4-7. *Wet pl.—Wh.*

Order 33.—ILLECEBRACEÆ.

148. Corrigi'ola. Strap-wort.

1. **C. littoralis.** L. linear-lanc.; fl. in term. and lateral clusters; st. many, procumbent or ascending. A. 7-8. *Sea Co., S. W. Eng.* !—*Wh.*

149. Hernia'ria. Rupture-wort.

1. **H. glabra.** L. oblong-oval, glabrous; fl. minute, clustered, spiked. P. 7-8. *San. grd.* !—*Gr.*
2. **H. ciliata.** L. roundish-ov., ciliated; fl. minute, in axillar clusters. P. 7-8. *Dry grd., S. Eng. and Ch. Is.* !—*Gr.*

150. Ille'cebrum. Knot-grass.

1. **I. verticillatum.** Fl. whorled, axillar; L. roundish-obovate, opp. A. 7. *Boggy pl., S. W. Eng.* !—*Wh.*

151. Polycar'pon. All-seed.

1. **P. tetraphyllum.** St. prostrate, branched; st.-L. usually in fours or opp.; fl. small, in term. pan. or axillar. A. 6-7. *S. Co.* !—*Wh.*

Order 34.—GROSSULARIACEÆ.*

152. Ri'bes.

* *Fl. solitary or in pairs; st. thorny.* Gooseberries.

1. † **R. Grossularia.** Fl. drooping; sep. reflexed. Sh. 5. *Hedg., etc.—Gr.*

** *Fl. in rac.*; *st. not thorny.* Currants.

2. R. alpinum. Rac. erect; bracts lanc., longer than pedicels; L. 3-lobed, shining beneath. Sh. 5. *Thickets*!—*Gr.*
3. R. rubrum. Rac. pendulous, rarely erect; bracts ov., shorter than pedicels; L. 5-lobed, not glandular beneath; cal. glabrous. Sh. 5. *Thickets., etc.*—*Gr.*—Red Currant.
4. R. nigrum. Rac. drooping; bracts subulate, shorter than pedicels; L. 3-5-lobed, with glandular dots beneath; cal. downy. Sh. 5. *Wet thickets.*—*Gr.*—Black Currant.

ORDER 35.—CRASSULACEÆ.

153. TILLÆ'A. Mossy Red Shanks.

1. T. muscosa. L. opp., connate, obtuse; pl. reddish. A. 5-6. *San. hea.*

154. COTYLE'DON. Navel-wort.

1. C. umbilicus. L. crenate; fl. drooping, in an erect rac. P. 6-7. *Bks. and rocks.*—*Yell.*

155. SE'DUM. Stone-crop.

* *L. flat, oval or oblong, toothed.*

1. S. Telephium. Fl. hermaphrodite. P. 8. *Fds. and bks.*—*Purple.*
2. S. Rhodiola. Fl. dicœcious. P. 6-7. *Alp. rocks.*—*Yell.*

** *L. ov., fleshy, entire; fl. yell., in a corymbose cyme.*

3. S. acre. L. closely tiled on bar. shoots. P. 6-7. *Walls.*—*Yell.*

*** *L. lanc., linear or subulate, spurred at base; fl. yell.*

4. S. reflexum. L. terete, lower recurved. P. 7-8. *Walls.*
5. S. rupestre. Lower L. closely tiled on bar. shoots; L. flattened. P. 6-7. *Rocks*!—*Yell.*
6. S. Forsterianum. Bar. shoots with L. in rosettes; L. flattened. P. 6-7. *Rocks*!—*Yell.*

**** *L. terete; fl. wh. or red; L. spurred at base.*

7. S. anglicum. L. ov., fleshy. A. 6-8. *San. pl.*—*Wh., with red spots.*

***** *L. terete; fl. wh. or red; L. not spurred at base.*

8. S. album. L. oblong; flowering st. erect, with short bar. shoots at base; corymbs glabrous, much branched. P. 7-8. *Walls and rocks.*—*Wh. or reddish.*
9. S. villosum. L. oblong, hairy; st. erect; st. and cyme glandular-hairy. P. 6-7. *Bogs on mtns.*—*Rose.*

10. S. dasyphyllum. L. ov.; st. procumbent, weak; st. and cyme glandular-hairy. P. 6-7. *Walls and rocks.* !—*Wh.*

156. SEMPERVI'VUM. House-leek.

1. † S. tectorum. L. (of bar. shoots) in rosettes, thick, fleshy. P. 7-8. *Walls and roofs.*—*Rose.*

ORDER 36.—SAXIFRAGACEÆ.

157. SAXIF'RAGA. Saxifrage.

* *Flowering st. prostrate, leafy; L. opp.; fl. solitary.*

1. S. oppositifolia. L. obovate, crowded, fringed. P. 4-6. *Alp. rocks.*—*Purp.*

** *Flowering st. erect, leafy, with bar. leafy shoots at base; fl. wh.*

2. S. hypnoides. Root-L. 3-5-fid, st.-L. 3-fid or linear; bar. shoots prostrate, weak. P. 5-7. *Mtns.*
3. S. cæspitosa. Root-L. crowded, fringed, 3-5-fid; lobes obtuse; st. 2-3 inches high; bar. shoots tufted. P. 5-7. *High mtns.* ! —*Wh.*

*** *Flowering st. erect or ascending, leafy, no barren shoots at base; fl. wh.*

4. S. tridactylites. St.-L. linear-oblong, or 3-fid, lowest often spathulate, entire; whole pl. glandular-hairy. A. 4-6. *Walls.*
5. S. granulata. Root-L. reniform, crenate or lobed; root with many bulbs; pan. glandular-hairy. P. 5. *Mead.*
6. S. cernua. Lower L. angular-reniform, lobed; axils of upper L. bearing small bulbs; st. 1-3-fld.; fl. drooping. P. 7. *Sco. Alps* !
7. S. rivularis. St. ascending; root-L. reniform, 3-5-lobed; st. 1-3-fld.; pet. scarcely longer than cal. A. 7-8. *Sco. Alp. rivulets* !

**** *Flowering st. erect or ascending, leafy; fl. yell.*

8. S. Hirculus. L. lanc., alt., not fringed; fl. 1-3, term., rather large. P. 8. *Bogs in N.* !
9. S. aizoides. L. linear-oblong, alt., fringed; fl. small, in a term. viscid pan. P. 7-9. *By mtn. rills.*

***** *Flowering st. erect, leafless; fl. in a close head.*

10. S. nivalis. L. obovate, serrate. P. 6-7. *Mtns.*—*Wh.*

****** *Flowering st. erect, leafless; fl. in a pan., wh. L. thin.*

11. S. stellaris. L. oblong-obovate, coarsely serrate; pan. few-fld. P. 6. *Wet pl. on mtns.*

******* *Flowering st. erect, leafless; fl. in a pan., wh. or pk., more or less spotted with red. L. somewhat thick and leathery.*

12. S. umbrosa. L. obovate, glabrous, crenate, edges cartilaginous; petiole dilated, flat, ciliate at edge. P. 6. *Mtns., Eng. and Ir.—Pk.*
13. S. hirsuta. L. roundish-elliptic, sharply serrate, hairy; petioles narrow, flat, hairy. P. 6. *Ir. mtns.!—Pk.*
14. S. Geum. L. orbicular or reniform, crenate or serrate; petioles narrow, hairy, channelled. P. 6. *Ir. mtns.—Wh. or crm.*

158. CHRYSOSPLE'NIUM. Golden Saxifrage.

1. C. alternifolium. Lower L. reniform, alt. P. 4-5. *By sha. rivulets.—Yellowish.*
2. C. oppositifolium. Lower L. roundish-cordate, opp. P. 4-5. *By sha. rivulets.—Yellowish.*

159. PARNAS'SIA. Grass of Parnassus.

1. P. palustris. Root-L. cordate, stalked; st.-L. sess.; fl. term., veined. P. 8-9. *Bogs.—Wh.*

ORDER 37.—ARALIACEÆ.

160. HED'ERA. Ivy.

1. H. Helix. L. with 5 angular lobes, upper ov., entire. Sh. 9. *Walls and trees.—Gr.*

161. ADOX'A. Tuberous Moschatel.

1. A. moschatellina. Head of fl. term.; st.-L. 2, opp., lobed. P. 5-6. *Damp sha. pl.—Gr.*

ORDER 38.—CORNACEÆ.

162. COR'NUS. Cornel.

1. C. sanguinea. L. opp., ov., stalked; fl. in term. corymbs; inv. 0. Sh. 6. *Wds. and hedg.—Wh.*
2. C. Suecica. Herbaceous; L. ov. or elliptic, opp., sess.; fl. minute, umbellate, enclosed in a petaloid 4-leaved inv. longer than fl. P. 6-7. *Mtn. past.!—Purp.*

ORDER 39.—LORANTHACEÆ.

163. VIS'CUM. Mistletoe.

1. V. album. Branches forked; L. obov.-lanc., obtuse. Sh. 5. *On trees.—Gr.*

ORDER 40.—UMBELLIFERÆ.

164. ERYN'GIUM. Eryngo.

1. **E. maritimum.** St.-L. wavy, 3-lobed, glaucous; sc. of inv. and recept. 3-fid. P. 7-8. *San. Co.—Blue.*
2. **E. campestre.** St.-L. bi-pinnatifid; sc. of inv. and recept. entire. P. 7-8. *Waste grd.*!—*Wh. or bluish.*

165. SANIC'ULA. Sanicle.

1. **S. Europæa.** L. serrate. P. 5-6. *Wds.—Whitish.*

166. HYDROCO'TYLE. Penny-rot.

1. **H. vulgaris.** Umb. about 5-fid.; L. peltate, crenate. P. 6-7. *Wet pl.—Wh.*

167. BUPLEU'RUM. Hare's Ear.

* *Upper L. oval.*

1. **B. rotundifolium.** L. perfoliate; bracts of involucel. broadly ovate. A. 7-9. *Corn-fds.—Yellowish.*

** *Upper L. narrow.*

2. **B. tenuissimum.** St. wiry, branched, decumbent or ascending, or st. simple, erect; L. narrow-linear; umb. minute; inv. of 5 subulate bracts longer than fl. A. 7. *Salt mar.—Yellowish.*
3. **B. aristatum.** St. branched; inv. and involucell. each of 4-5 lanc. bracts longer than umb.; L. linear-lanc. A. 7. *Rocks.*!—*Crm.*
4. **B. falcatum.** St. erect, slightly branched; lower L. oblong-ov., stalked, upper linear-lanc.; bracts shorter than umb. P. 8. *Hea.* !—*Yell.*

168. ASTRAN'TIA. Astrantia.

1. **A. major.** Root-L. 5-7 lobed; inv. straw-coloured. P. 5-8. *Wds.* !—*Wh. or reddish.*

169. LIBANO'TIS. Mountain Meadow Saxifrage.

1. **L. montana.** L. bi-tripinnate; umb. hemispherical, close. P. 8. *Chalky past.—Wh.*

170. CAU'CALIS. Bur Parsley.

1. **C. daucoides.** L. bi-tripinnate; segm. pinnatifid; inv. 0; involucel 3-5 leaved. A. 6. *Chalky fds.—Reddish wh.*
2. **C. latifolia.** L. pinnate; lts. oblong-lanc., cut; inv. and involucell. each 3-5 leaved. A. 7. *Chalky fds.*!—*Rose.*

171. Dau'cus. Carrot.

1. D. Carota. Prickles of fr. slender, distinct at base; umb. (in fr.) concave; L. bi-tripinnate; lts. pinnatifid. B. 6-8. *Ro. si. and fds.—Wh.*
2. D. maritimus. Prickles of fr. flattened, united at base; umb. (in fr.) convex; L. tripinnate; lts. pinnatifid, somewhat fleshy. B. 7-8. *Sea Co.!—Wh.*

172. Tori'lis. Hedge Parsley.

* *St. erect; umb. term.*

1. T. Anthriscus. Inv. of 3-4 bracts; bristles of fr. curved, rarely hooked. A. 7-9. *Hedg., etc.—Reddish-wh.*
2. T. infesta. Inv. of 1 bract or 0; bristles of fr. hooked. A. 7-8. *Cult. fds.—Wh.*

** *St. prostrate or spreading; umb. lateral, sess. or nearly so.*

3. T. nodosa. Umb. small, crowded; outer fr. most bristly. A. 5-7. *Bks.—Wh.*

173. Scan'dix. Shepherd's Needle.

1. S. Pecten-Veneris. L. bipinnatifid; segm. linear; beak of fr. fringed. A. 6. *Corn-fds.—Wh.*

174. Anthris'cus. Beaked Parsley.

* *Fr. bristly.*

1. A. vulgaris. St. glabrous, swollen under the joints; umb. lateral; L. tripinnate; segm. cut. A. 5-6. *Waste pl.—Wh.*

** *Fr. glabrous.*

2. A. sylvestris. St. downy; umb. term.; bracts of involucell. ov. P. 4-6. *Hedg.—Wh.*
3. † A. cerefolium. St. hairy only above the joints; umb. lateral, sess.; bracts of involucell. lanc. A. 5-6. *Waste grd.!—Wh.* —Garden Chervil.

175. Cicu'ta Water Hemlock.

1. C. virosa. Lower L. pinnate or bipinnate; lts. trifid; st.-L. bi-triternate; lts. lanc., serrate. P. 8. *Dit. and riv.—Wh.*

176. Tri'nia. Dwarf Burnet Saxifrage.

1. T. vulgaris. L. tripinnate. P. 5-6. *Calc. hills.!—Crm.*

177. Smyr'nium. Alexanders.

1. S. Olusatrum. St.-L. ternate, lower bi-triternate, with large sheaths at base; lts. broad, lobed, serrate, glabrous. B. 5. *Waste Grd.—Yellowish.*

178. A'PIUM. Celery.

1. **A. graveolens.** L. glabrous; lts. cuneate, cut; umb. often sess. **B.** 5-8. *Dit.—Wh.*

179. ÆGOPO'DIUM. Gout Weed.

1. **Æ. Podagraria.** Lts. ov., pointed, serrate; root-L. biternate. **P.** 5-6. *Damp pl.—Wh.*

180. PIMPINEL'LA. Burnet Saxifrage.

1. **P. saxifraga.** Root-L. pinnate; lts. roundish-ov., serrate, (often pinnatifid, segm. linear) lts. of st.-L. linear; st. terete. **P.** 7-8. *Dry past.—Wh.*
2. **P. magna.** All L. pinnate; lts. ov., serrate, term. one trifid; st. angular. **P.** 7-8. *Wds. and hedg.—Wh.*

181. CONI'UM. Hemlock.

1. **C. maculatum.** St. terete, glabrous, spotted. **B.** 6-7. *Hedg.—Wh.*

182. BU'NIUM. Pig Nut. Earth Nut.

1. **B. flexuosum.** Inv. 0 or of 1-3 bracts; styles erect in fr. **P.** 5-6. *Dry past.—Wh.*
2. **B. Bulbocastanum.** Inv. of several bracts; styles reflexed in fr. **P.** 6-7. *Chalky fds.* !—*Wh.*

183. CA'RUM. Carraway.

1. † **C. Carui.** Inv. and involucell. 0; L. bipinnate. **B.** 6. *Mead. —Wh.*
2. **C. verticillatum.** Umb. with both inv. and involucell.; L. pinnate; segm. of lts. whorled. **P.** 7-8. *Damp past.—Wh.*

184. PHYSOSPER'MUM. Cornish Lovage.

1. **P. cornubiense.** Root-L. triternate; lts. cuneate, cut. **P.** 7-8. *Cornwall* !—*Wh.*

185. SI'UM. Water Parsnip.

1. **S. latifolium.** L. pinnate; lts. lanc., large, equally serrate. **P.** 6.7. *Riv. and dit.—Wh.*
2. **S. angustifolium.** L. pinnate; lts. ov., or ov.-lanc., unequally serrate. **P.** 7-8. *Dit.—Wh.*

186. SI'SON. Stone Parsley.

1. **S. Amomum.** Lts. of lower L. ov., lobed, serrate. **A.** or **B.** 8. *Calc. soil.—Wh.*

187. HELOSCIA'DIUM. Marsh-wort.

1. H. inundatum. Umb. of 2-3 rays; segm. of submersed L. capillary; upper L. pinnate; lts. cuneate, trifid. P. 5-7. *Pools and dit.*—*Wh.*
2. H. nodiflorum. L. pinnate; lts. ov. or ov.-lanc., unequally serrate; umb. 4-8-rayed, nearly sess., opp. the leaves. P. 7-8. *Ditch. etc.*—*Wh.*
3. H. repens. L. pinnate; lts. roundish; ped. as long as umb. P. 5-7. *Boggy pl.*—*Wh.*

188. PETROSELI'NUM. Parsley.

1. † P. sativum. L. bipinnate; st. erect. B. 6-8. *Rocks, etc.*—*Yell.*
2. P. segetum. Lower L. pinnate; lts. 5-10 pairs, ov., irregularly serrate; umb. very unequal. A. 8. *Fds. or banks.*—*Wh.*

189. CHÆROPHYL'LUM. Cow Parsley.

1. C. temulentum. St. swelled below joints, hairy, spotted. B. 6-8. *Hedg., etc.*—*Wh.*

190. MYR'RHIS. Sweet Cicely.

1. M. odorata. L. very large; pl. aromatic. P. 5. *Hilly past., etc.*—*Wh.*

191. ME'UM. Bald Money. Spignel. Meu.

1. M. athamanticum. L. bi-tripinnate. P. 5-6. *Hilly past.*—*Yellowish wh.*

192. FŒNIC'ULUM. Fennel.

1. F. vulgare. L. tripinnate. P. 7-8. *Near sea, E. Co.*—*Yell.*

193. SILA'US. Pepper Saxifrage.

1. S. pratensis. Root-L. bi-tripinnate; segm. entire or 3-fid. P. 6-9. *Mead.*—*Yellowish.*

194. CRITH'MUM. Samphire.

1. C. maritimum. L. bi-triternate; lts. lanc. or linear. P. 8. *Rocks by sea.*—*Wh.*

195. CORIAN'DRUM. Coriander.

1. † C. sativum. Lower L. bipinnate; lts. ov. or cuneate, cut; segm. of upper L. linear, of uppermost setaceous. A. 6. *Fds.*—*Wh.*

196. Œnan'the. Water Drop-wort.

* *Ripe fr. cylindrical, surrounded with a thickened ring at base.*

1. **Œ. pimpinelloides.** Roots fibrous, with oval (not sess.) tubers; lts. of root-L. cuneate, deeply cut. **P.** 7-9. *Past.*!—*Wh.*
2. **Œ. silaifolia.** Roots with sess. oblong tubers; lts. all linear, acute; inv. 0. **P.** 6. *Marshes.*—*Wh.*

** *Ripe fr. without a thickened ring at base; umb. term.*

3. **Œ. fistulosa.** St. and petioles tubular; st. with creeping runners; umb. of few (usually 3) rays; lts. few, linear. **P.** 7-9. *Dit.*—*Wh. or pinky.*
4. **Œ. Lachenalii.** St. more or less solid, erect; umb. 8-15-rayed; st.-L. pinnate or bipinnate; lts. linear. **P.** 7-9. *Marshes, chiefly near sea.*—*Wh.*
5. **Œ. crocata.** St. erect, branched, stout; L. bi-tripinnate; lts. roundish or cuneate, cut; umb. 15-20-rayed. **P.** 7. *Wet. pl.* —*Wh.*

* *Ripe fr. without a thickened base; umb. mostly lateral, on very short ped., opp. to L.*

6. **Œ. Phellandrium.** St. erect; L. tripinnate; lts. ov., cut; lts. of submersed L. usually in capillary segm. **B.** 7-9. *Dit. and ponds.*—*Wh.*
7. **Œ. fluviatilis.** St. floating; L. bipinnate; lts. entire or pinnatifid; lts. of submersed L. in linear parallel segm. **B.** 7-9. *Rivers.*—*Wh.*

197. Ligus'ticum. Scotch Lovage.

1. **L. scoticum.** L. biternate; lts. cuneate. **P.** 7. *Sea Co. in N.* —*Wh.*

198. Æthu'sa. Fool's Parsley.

1. **Æ. Cynapium.** L. dark-gr., bi-tripinnate; lts. ov.-lanc., cut. **A.** 6-8. *Cult. gr.*—*Wh.*

199. Angel'ica. Angelica.

1. **A. sylvestris.** Cal. obsolete; st. glabrous, polished; L. bi-tripinnate; lts. ov., serrate. **P.** 7-9. *Damp pl. and wds.*—*Wh.*
2. † **A. Archangelica.** Cal. 5-toothed; st. glabrous, furrowed; L. bipinnate; lts. ov.-lanc., serrate, hardly decurrent, term. one 3-lobed. **P.** 6-9. *Wat. pl.*!—*Greenish.*

200. Pastina'ca. Parsnip.

1. **P. sativa.** L. pinnate, downy beneath; lts. ov., cut; st. angular. **B.** 7-8. *Calc. past.*—*Yell.*

201. HERACLE'UM. Cow Parsnip.

1. H. Sphondylium. L. pinnate; lts. pinnatifid. B. 7-8. *Fds.—Wh.*

202. TORDYL'IUM. Hart-wort.

1. T. maximum. Pet. of radiate fl. 2-lobed; st. with reflexed hairs; L. pinnate; lts. lanc. A. 6-7. *Waste gr.*!—*Pk.*

203. PEUCE'DANUM. Hog's Fennel.

1. P. officinale. L. 5 times ternate; lts. linear. P. 6-7. *Salt mar.*!—*Yell.*
2. P. palustre. L. tripinnate; lts. pinnatifid, segm. linear-lanc.; inv. and involucell. of several lanc. or linear acute bracts; juice milky. P. 7. *Mar.*!—*Wh.*
3. † P. Ostruthium. L. biternate; lts. broad ov.; inv. 0; involucell. of few narrow bracts. P. 6. *Mead., N. Eng. and Sco.*!—*Wh.*

ORDER 41.—CAMPANULACEÆ.

204. LOBE LIA. Lobelia.

1. L. Dortmanna. St. almost leafless; L. radical, nearly cylind., hollow, submersed; fl. racemose, drooping. P. 7. *Lakes.—Pale blue.*
2. L. urens. St. leafy; st.-L. lanc., sess., serrate; fl. racemose, erect. P. 8-9. *Bushy hea.*!—*Blue.*

205. JASIO'NE. Sheep's Scabions.

1. J. montana. St. branched; L. oblong or linear, wavy; fl. heads term., solitary. A. 6-7. *San. pl.—Blue.*

206. PHYTEU'MA. Rampions.

1. P. orbiculare. Fl. heads globose; stig. 3; lower L. cordate-ov., upper lanc., sess. P. 7-8. *Past.—Blue.*
2. P. spicatum. Fl. heads cylind., sess.; stig. 2; L. as last. P. 7. *Wds. and thickets, S. Eng.*!—*Crm.*

207. CAMPAN'ULA. Bell-flower.

* *St.-L. linear-lanc. or linear, glabrous.*

1. C. rotundifolia. Root-L. roundish-cordate or reniform, disappearing early. P. 7-8. *Hea. and past.—Blue.*
2. C. persicifolia. Root-L. obovate, crenate; rac. few-fld.; fl. large, wide, and cup-shaped. P. 7. *Wds.*!—*Blue.*

** *St.-L. linear-lanc., or linear, roughish; st. angular, rough.*

3. C. patula. Root-L. elliptic or oblong; fl. few, rather large, wide at mouth. B. 7-8. *Hedg., etc.—Blue.*

4. C. Rapunculus. Root-L. ov. or oblong-lanc.; fl. small, many, racemed. B. 7-8. *Hedg., etc.—Blue.*

*** *St.-L. cordate-lanc.; fl. erect, sess., chiefly in a term. cluster.*

5. C. glomerata. Root-L., stalked; st.-L. sess. P. 6-8. *Calc. past.—Purp.*

**** *St.-L. cordate, cordate-lanc. or lanc., roughish; fl. stalked, large.*

6. C. rapunculoides. Fl. solitary, axillar, in a secund rac.; root-L. cordate on long stalks. P. 7-8. *Wds.*!—*Pale blue.*
7. C. Trachelium. L. cordate, or cordate-lanc., serrate; ped. axillar, 2-3-fid.; fl. large. P. 7-8. *Wds. and hed.—Purp.*
8. C. latifolia. L. ov.-lanc., serrate, lower stalked, upper sess.; ped. erect, 1-fid.; fl. large. P. 7-8. *Wds., etc.—Purp.*

208. SPECULA'RIA. Venus's Looking Glass.

1. S. hybrida. L. oblong, wavy, sess., rough; cal. longer than cor. A. 6-9. *Corn-fds.—Purp.*

209. WAHLENBER'GIA. Ivy-leaved Bell-flower.

1. W. hederacea. L. roundish-cordate, 5-angled, stalked, glabrous; st. thread-like; fl. on long ped. P. 7-8. *Damp sha. pl.—Blue.*

ORDER 42.—CAPRIFOLIACEÆ.

210. SAMBU'CUS. Elder.

1. S. nigra. Shrub or tree; corymb 5-fid; stip. 0; lts. ov., serrate. P. 7. *Hedg.—Wh.*
2. S. Ebulus. Herbaceous; corymb 3-fid; stip. cordate-ov.; lts. lanc., serrate. P. 6. *Wds. and hedg.*!—*Purp.*—Dane-wort.

211. VIBUR'NUM. Guelder Rose.

1. V. Opulus. L. lobed, glabrous, petioles glandular; outer fl. of corymb large, barren. Sh. 5-6. *Wds. and hedg.—Wh.*
2. V. Lantana. L. ov.-cordate, serrate, downy above, mealy-hairy beneath. Sh. 5-6. *Wds. and hedg.—Wh.*—Wayfaring Tree.

212. LONICE'RA. Honeysuckle.

* *St. climbing; fl. in heads.*

1. † L. Caprifolium. Upper L. connate. P. 5. *Wds. and thick. —Yell.*
2. L. Periclymenum. L. all distinct, oval. P. 6-8. *Wds., etc.—Wh., yell., or reddish.*

** *St. erect; ped. 2-fld.*

3. **L. Xylosteum.** L. oval, opp., downy. P. 7. *Thick.!—Crm. or reddish.*

213. LINNÆ'A. Linnæa.

1. **L. borealis.** L. ov., opp.; ped. 2-fld.; st. trailing. P. 5-6. *Fir wds., Sco.—Whitish.*

ORDER 43.—RUBIACEÆ.

214. RU'BIA. Madder.

1. **R. peregrina.** L. 4 (rarely 6) in a whorl, ov. or lanc., shining above, edged with prickles pointing backwards. P. 6-7. *Thickets.—Greenish yell.*

215. GA'LIUM. Ladies' Bed-straw.

* *Fr. covered with small hooked bristles.*

1. **G. Aparine.** L. 6-8 in a whorl; ped. axillar, about 3-fld. A. 5-8 *Hedg.—Wh.*
2. **G. Vaillantii.** L. 6-8 in a whorl; ped. axillar, 3-9-fld.; fr. smaller than last. A. 7. *Fds.!—Greenish yell.*
3. **G. boreale.** L. 4 in a whorl, lanc.; fl. crowded, term. P. 7-8. *Damp mtn. pl.—Wh.*

** *Fr. distinctly tubercled or granulated, not bristly.*

4. **G. anglicum.** L. about 6 in a whorl, linear-lanc.; st. rough, with deflexed prickles; L. awned; fl. minute, in small axillar pan. A. 6-7. *Walls and dry pl.—Wh. or gr.-yell.*
5. **G. saxatile.** Procumbent. L. obovate, mucronate, about 6 in a whorl; st. smooth; fl. numerous in lat. and term. pan. P. 7-8. *Hea.—Wh.*
6. **G. tricorne.** St. and L. rough and clinging, with strong deflexed prickles; L. 6-8 in a whorl; ped. axillar, about 3-fld., curved back in fr. A. 6-8. *Fds.—Wh.*
7. **G. uliginosum.** Erect or ascending; st. weak; L. and st. with reflexed prickles; L. 6-8 in a whorl, bristle-pointed; pan. few-fld., axillar. P. 8. *Wet pl.—Wh.*

*** *Fr. smooth; fl. yellow.*

8. **G. cruciatum.** L. 4 in a whorl, ov., or ov.-oblong, hairy; fl. minute, numerous, in axillar corymbs. P. 4-6. *Hedg.*
9. **G. verum.** L. about 8 in a whorl, linear, furrowed, deflexed when in fl.; fl. in dense pan. P. 5-6. *Hedg. and past.*

**** *Fr. smooth; fl. wh.; L. 6-8 in a whorl; st. and edges of L. smooth, rarely hairy, never prickly.*

10. **G. mollugo.** St. ascending; L. obovate or oblong; pan. large, term., many-fld. P. 7-8. *Hedg., etc.—Wh.*

11. **G. pusillum.** St. many, spreading; L. about 8 in a whorl, linear-lanc., bristle-pointed; pan. few-fld. P. 7-8. *Hilly past.—Wh.*

***** *Fr. smooth; st. erect or ascending; L. 4-8 in a whorl, more or less rough, with prickles at the edge.*

12. **G. erectum.** L. 6-8 in a whorl, bristle-pointed; prickles of L. pointing backwards. P. 6-8. *Hedg.—Wh.*
13. **G. palustre.** L. about 4 in a whorl, unequal, oblong, obtuse; st. weak; fl. in a term. pan. P. 6-8. *Wet pl — Wh.*

216. ASPE'RULA. Woodruff.

* *L. 4 in a whorl.*

1. † **A. taurina.** L. ov.; fl. in stalked axillar heads, with fringed bracts. P. 5-6. *Wds.* !—*Wh.*
2. **A. cynanchica.** L. linear; fl. in a corymb. P. 6-7. *Calc. past. —Flesh.*

** *L. 6-10 in a whorl.*

3. **A. odorata.** L. 6-8 in a whorl, lanc.; fr. rough; fl. in a term. corymb. P. 5. *Wds.—Wh..*
4. † **A. arvensis.** L. 6-10 in a whorl, linear-lanc.; fr. smooth; fl. clustered, term., surrounded by an inv. of ciliated bracts. A. 5-6. *Fds.* !—*Blue.*

217. SHERAR'DIA. Field Madder.

1. **S. arvensis.** L. 6 in a whorl; st. many, usually prostrate; fl. in term. clusters, with an inv. of about 8 bracts, longer than fl. A. 5-8. *Fds.—Lilac.*

ORDER 44.—VALERIANACEÆ.

218. CENTRAN'THUS. Valerian.

1. † **C. ruber.** All L. ov.-lanc., glabrous, spur long. P. 6-9. *Walls and rocks.—Red.*
2. † **C. Calcitrapa.** Root-L. ov.; st.-L. pinnatifid; spur short. P. 7. *Old walls.* !—*Pinky-wh.*

219 VALERIA'NA. Valerian.

1. **V. officinalis.** All L. pinnate; lts. lanc., toothed, usually 7-10 pairs (rarely 4-6), with a term. leafl., not larger than rest. P. 6. *Wet pl. and wds.—Pk. or wh.*
2. **V. dioica.** Root-L. ov., stalked; st.-L. pinnatifid, term. lobe largest. P. 5-6. *Wet pl.—Wh. or flesh.*

3. V. pyrenaica. L. large, cordate, toothed, stalked; upper L. with 1-2 pairs of lts. P. 6-7. *Sco. wds.—Rose.*

220. Fe'dia. Corn Salad. Lamb's Lettuce.

* *Fr. with* 1 *fertile and* 2 *barren cells.*

1. F. olitoria. Fr. crowned with 3 teeth, corky at back of fert. cell; fl. in dense heads; L. ov.-spathulate. A. 4-6. *Corn-fds. —Bluish-wh.*
2. F. carinata. Fr. oblong, keeply grooved, crowned with 1 tooth; cells nearly equal; fl. in dense heads; L. ov.-spathulate. A. 4-6. *Hedg. bks.*!—*Bluish-wh.*
3. F. auricula. Fr. roundish, crowned with 1 (rarely 3) leafy tooth; bar. cells inflated, narrow-oblong; st. repeatedly forking; fl. in the forks. A. 7-8. *Cult. grd.*!—*Pk. or bluish.*

** *Fert. cell* 1, *barren cells obsolete or* 0.

4. F. dentata. Fr. oval, crowned with 4 unequal teeth; fl. in term. corymbs and in the forks of the st.; L. narrow. A. 6-7. *Corn-fds.—Flesh.*

Order 45.—DIPSACACEÆ.

221. Dip'sacus. Teazle.

1. † D. Fullonum. Heads oval-conical; sc. of recept. hooked at end. B. 7. *Damp pl.*!—*Lilac.*
2. D. sylvestris. Heads oval-conical; sc. of recept. not hooked; L. opp., upper connate, serrate. B. 7-9. *Damp pl.—Lilac.*
3. D. pilosus. Heads roundish, hairy; L. ov., with a pair of lts. at base. B. 8-9. *Damp pl.—Wh.*

222. Knau'tia. Field Scabions.

1. K. arvensis. Cor. 4-fid; heads of fl. radiate; lower L. simple or pinnatifid; st. L. pinnatifid. P. 7-9. *Hedg. and fds.—Lilac.*

223. Scabio'sa. Scabions.

1. S. succisa. Heads of fl. somewhat globose, not radiate; cor. 4-fid; L. obovate or lanc. P. 7-10. *Damp mead. and wds.—Viol.*
2. S. columbaria. Heads of fl. flat, radiate; cor. 5-fid; root-L. ov. or oblong, notched; st.-L. pinnatifid, segm. linear. P. 6-9. *Calc. past.—Pale lilac.*

ORDER 46.—COMPOSITÆ.

SUB-ORDER I.—CICHORACEÆ.

224. LAP'SANA. Nipple-wort.

1. L. communis. Fl. in a very lax pan.; L. ov., lower lyrate. A. 7-9. *Waste and cult. grd.—Yell.*

225. ARNO'SERIS. Dwarf Nipple-wort.

1. A. pusilla. L. all radical, obovate; scape branched. A. 6. *Grav. soil.—Yell.*

226. CICHO'RIUM. Endive. Succory.

1. C. Intybus. Lower L. runcinate, upper lanc., clasping; fl. in pairs, large, sess. P. 7-8. *Hedg. and fds.—Blue.*

227. LACTU'CA. Lettuce.

* *L. prickly on mid-rib beneath.*

1. L. Saligna. St.-L. linear, entire, sagittate at base; lower L. pinnatifid; beak 2-3 times as long as fr.; fl. almost spiked. B. 7-8. *Near sea.*!—*Yell.*
2. L. Scariola. L. erect, sinuate or pinnatifid, ciliate-toothed, clasping; pan. leafy; bracts as long as fr.; fr. pale. B. 7-8. *Borders of fds.*!—*Yell.*
3. L. virosa. L. spreading, toothed or sinuate, auricled and clasping; fl. in a loose pan.; beak as long as fr.; fr. black. B. 7-8. *Hedg.*!—*Yell.*

** *L. not prickly on mid-rib beneath.*

4. L. muralis. L. lyrate-runcinate, auricled, clasping; flor. 5. P. 7-8. *Walls, wds., etc.—Yell.*

228. TARAX'ACUM. Dandelion.

1. T. officinale. L. mostly runcinate; scape 1-fl. P. 3-10. *Bks., etc.—Yell.*

229. BORKHAU'SIA. Hawk's Beard.

1. B. taraxacifolia. All achenes equally beaked; L. mostly radical, runcinate-pinnatifid; inv. bristly; outer sc. whitish at edge. B. 6-7. *Calc. soil.*!—*Yell.*
2. B. fœtida Inner achenes with a long beak, outer scarcely beaked; lower L. runcinate, upper lanc.-sagittate; inv. hairy. B. 6-7. *Chalky soil*!—*Yell.*

230. CRE'PIS. Hawk's Beard.

* *L. rough, bristly, hairy.*

1. C. biennis. Lower L. runcinate, upper lanc., toothed, clasping; achenes 10-13 ribbed. B. 6-7. *Dry pl.—Yell.*

** *L. glabrous or slightly hairy, not rough.*

2. C. succisæfolia. L. entire, lower oblong, stalked, upper narrow, clasping; achenes 20 ribbed. P. 7-8. *Wds.—Yell.*
3. C. virens. L. toothed or runcinate, upper linear, sagittate, clasping; fl. small. A. 6-8. *Bks.—Yell.*
4. C. paludosa. Lower L. ov.-oblong, stalked, somewhat runcinate; upper cordate-lanc., clasping; fl. few, large; inv. with black hairs; achenes 10 ribbed. P. 7-9. *Damp sha. pl. —Yell.*

231. MULGE'DIUM. Blue Sow Thistle.

1. M. alpinum. L. lyrate, term. segm. triangular. P. 7-8. *Sco. mtns.*!—*Blue.*

232. SON'CHUS. Sow Thistle.

* *Inv. glabrous.*

1. S. oleraceus. L. pinnatifid or undivided; achenes longitudinally ribbed and transversely wrinkled. A. 6-8. *Fds.—Yell.*
2. S. asper. L. pinnatifid or undivided, prickly-toothed, clasping; achenes longitudinally ribbed, not transversely wrinkled. A. 6-8. *Fds.—Yell.*

** *Inv. glandular-hairy.*

3. S. arvensis. Lower L. runcinate, upper lanc., entire, clasping, with rounded auricles. P. 8-9. *Corn-fds.—Yell.*
4. S. palustris. Lower L. runcinate, upper lanc., often 8-10 inches long, clasping, with long acute auricles; st. 6-8 ft. high. P. 7-8. *Mar.*!—*Yell.*

233. HIERA'CIUM. Hawkweed.

This genus is very variously understood by different botanists, some recognising 8, others 32 species, but they are very difficult of discrimination, and the same remarks apply here as in Rubus (127). We follow Bentham in the following synopsis.

* *Pl. with runners.*

1. H. pilosella. Scapes leafless, 1-fld.; L. oblong or lanc., wh. beneath. P. 5-8. *Bks.—Yell.*
2. † H. aurantiacum. Scape leafy near base, with a term. corymb of 2-10-fl.; inv. with black hairs; L. obovate-lanc. P. 6-7. *Hilly wds.*!—*Orange-red.*

** *No runners; st. 1-fld.; fl. large.*

3. H. alpinum. Root-L. oblong or lanc.; st. with (usually) 1-3 narrow L.; inv. with long shaggy or silky hairs. P. 7-8. *Mtns.—Yell.*

*** *No runners; root-L. usually present at time of flowering; st. few or many-fld.; st.-L. 1 or few, outer sc. of inv. few, short.*

4. H. murorum. Root-L. ov. or oblong, stalked; fl. corymbose; st.-L. ov. or lanc., not clasping. P. 6-8. *Wds., bks., etc.*—*Yell.*
5. H. cerinthoides. St.-L. 1 or 2, clasping, with large rounded auricles; root-L. obovate; fl. corymbose. P. 7-8. *Mtns.*!—*Yell.*

**** *No runners; no root-L. at time of flowering; st. few or many-fld; outer sc. of inv. tiled; st.-L. several*

6. H. prenanthoides. St.-L. clasping, with short rounded auricles. P. 7-8. *Mtns.*!—*Yell.*
7. H. umbellatum. Upper flowering branches in an irregular umb.; lower branches axillar; st.-L. lanc. or linear. P. 8-9. *Wds. and hedg.*—*Yell.*
8. H. sabandum. Flowering branches corymbose; st.-L. ov.-lanc., or lanc., with a rounded base. P. 7-9. *Wds.*—*Yell.*

234. HYPOCHÆ'RIS. Cat's Ear.

* *Inv. oblong, nearly or quite glabrous; scape branched, leafless, glabrous.*

1. H. radicata. L. all radical, runcinate, hairy; ped. thickened and scaly under the fl. P. 7-8. *Past. and bks.*—*Yell.*
2. H. glabra. L. oblong, toothed, glabrous. A. 6-8. *Grav. pl.*—*Yell.*

** *Inv. hemispherical, hairy; scape simple, 1-(rarely 2) fld.*

3. H. maculata. L. obovate-oblong, toothed, spotted above. P. 7-8. *Calc. past.*!—*Yell.*

235. THRIN'CIA. Hawkbit.

1. T. hirta. L. all radical, lanc., toothed or entire, hairy; scape 1-fld. P. 7-8. *Grav. past.*—*Yell.*

236. APAR'GIA. Hawkbit.

1. A. hispida. L. all radical, runcinate, rough, hairs forked; scape 1-fld.; inv. hairy. P. 6-8. *Past.*—*Yell.*
2. A. autumnalis. L. all radical, toothed or pinnatifid, glabrous, or nearly so; scape branched; ped. swelled under fl.; pappus brown. P. 7-8. *Mead.*—*Yell.*

237. PI'CRIS. Ox-tongue.

1. P. hieracioides. St. branched; L. lanc., wavy. P. 7-8. *Fds. and bks.*—*Yell.*

238. TRAGOPO'GON. Goat's Beard.

1. T. pratensis. Fl. yell.; flor. as long or longer than inv. P. 6-7. *Mead. and bks.*!
2. T. minor. Fl. yell.; inv. much longer than flor. P. 6-7. *Mead. and bks.*
3. T. porrifolius. Fl. purp., large; ped. swelled below fl. B. 6. *Damp pl.*!—Salsify.

239. HELMIN'THIA. Bristly Ox-Tongue.

1. H. echioides. Hairs rising from white tubercles; L. lanc., upper clasping. A. 7-8. *Dry fds.—Yell.*

SUB-ORDER II.—CYNAROCEPHALÆ.

240. CARLI'NA. Carline Thistle.

1. C. vulgaris. St. 1- or more fld., cottony; L. lanc., sinuate, prickly; outer sc. of inv. pinnatifid or bi-pinnatifid. B. 7-10. *Hilly past.—Yellowish-red.*

241. SIL'YBUM. Milk Thistle.

1. † S. Marianum. L. glabrous, pinnatifid, prickly. B. 6-7. *Waste pl.—Purp.*

242. CAR'DUUS. Thistle.

* *Pappus simple, rough; L. all thorny and decurrent.*

1. C. nutans. Fl. large, solitary, drooping; sc. of inv. lanc., outer reflexed; ped. thornless above. B. 5-8. *Waste grd.—Purp.*
2. C. crispus. Fl. not large, usually clustered, roundish, stalked or nearly sess., rarely drooping; ped. with a thorny border up to fl.; sc. of inv. linear. A. 6-7. *Waste grd. and hedg.—Crims.-purp.*
3. C. tenuiflorus. Fl. rather small, cylind., sess., clustered; sc. of inv. ov.-lanc., erect. A. 6-8. *Near sea.—Pk.*

* *Pappus feathered; L. truly decurrent, thorny, pinnatifid.*

4. C. lanceolatus. Sc. of inv. lanc., thorny, spreading; fl. large, usually solitary. B. 7-8. *Waste pl.—Purp.*
5. C. palustris. Sc. of inv. ov.-lanc., mucronate, adpressed; fl. small, clustered. B. 7-8. *Damp Mead.—Purp. or wh.*

*** *Pappus feathered; L. not decurrent or but very slightly so; L. strongly thorny.*

6. C. eriophorus. St. erect; fl. large, globose; inv. with a dense cottony web; L. large, cottony beneath, deeply pinnatifid, lobes 2-fid., segm. alternately pointing upwards and downwards. B. 8. *Calc. past.—Purp.*

7. C. acaulis. Stemless or nearly so; fl. large, usually 1, almost sess.; L. pinnatifid. P. 7-9. *Past.—Purp.*
8. C. arvensis. L. wavy, pinnatifid, glabrous, or nearly so; inv. with adpressed lanc. sc. ending in a short spreading spine. P. 7. *Waste grd. and fds.—Purp.*
9. C. setosus. L. lanc., flat, entire or slightly lobed. P. 7-8. *Sco.* !*—Purp.*

**** *Pappus feathered; L. not decurrent, fringed with minute weak prickles, or ciliate teeth.*

10. C. pratensis. L. chiefly radical, lanc., wavy, cottony beneath, edged with minute prickles; st. 1-fld. P. 6-8. *Boggy past.—Purp.*
11. C. tuberosus. L. lanc., deeply pinnatifid, slightly cottony beneath; st. 1-3-fld. P. 8. *Thickets.* !*—Purp.*
12. C. heterophyllus. L. large, lanc., clasping, soft, ciliate-toothed, glabrous above, cottony beneath; inv. glabrous; fl. large, solitary. P. 7-8. *Hilly past. in N.—Purp.*

243. Onopor'dum. Cotton Thistle.

1. O. Acanthium. St. branched, tall, many-fid., woolly. L. ov.-oblong, wavy, prickly, very decurrent; inv. globose. B. 7-8. *Waste grd. and Hed.—Purp.*

244. Arc'tium. Burdock.

1. A. Lappa. Heads large, globose; sc. of inv. glabrous, all yellowish-gr. B. 7-8. *Waste pl.*
2. A. intermedium. Heads large, ov.; sc. of inv. with a cottony web; inner sc. as long as flor. B. 7-8. *Waste pl.*
3. A. Bardana. Heads small, ov.; sc. of inv. purplish, with a cottony web; inner sc. shorter than flor. B. 7-8. *Waste pl.*

245. Saussure'a. Saussurea.

1. S. alpina. L. ov.-lanc. or lanc., serrate; fl. ovoid, in a close, small, term. corymb. P. 7-8. *Mtns.—Purp.*

246. Serrat'ula. Saw-wort.

1. S. tinctoria. L. pinnatifid, (rarely simple); term. segm. largest, finely serrate; sc. of inv. adpressed, inner coloured; fl. corymbose. P. 7-8. *Wds. and fds.—Purp.*

247. Centaure'a Knapweed.

* *Sc of inv. thorny.*

1. † C. solstitialis. Fl. yell.; outer sc. of inv. with palmate spines; st.-L. linear-lanc., decurrent; st. erect, winged. A. 7-8. *Fds.* !

2. C. Isnardi. Fl. purp.; sc. of inv. ending in palmate spines; L. lyrately toothed; st. procumbent. P. 7-8. *Ch. Is.*!
3. C. Calcitrapa. Fl. rose; sc. of inv. ending in stout thorns; L. pinnatifid, segm. few, linear; st. erect, branched. P. 7-8. *Dry past.*

** *Sc. of inv. fringed or torn, not thorny; fl. radiate.*

4. C. Cyanus. Fl. sky-blue; sc. of inv. greenish, edges brown and wh., toothed; L. linear; st. cottony. A. 7-8. *Corn fds.*
5. C. nigrescens. Outer sc. of inv. dark brown or black, nearly all ov., pectinate; L. lanc., toothed. P. 7-8. *S. and W. Eng.* —*Purp.*
6. C. Scabiosa. Outer sc. of inv. green in centre, edged with black, pectinate; inv. large; L. pinnatifid. P. 7-8. *Fds. and dry pl.*—*Purp.*

*** *Sc. of inv. fringed or torn; flor. all tubular, not radiate.*

7. C. nigra. Outer bracts of inv. ov., blackish, pectinate; L. lanc., toothed. P. 7.8. *Dry gr.*—*Purp.*

SUB-ORDER III.—CORYMBIFERÆ.

248. Bi'dens. Bur Marygold.

1. B. cernua. Fl. drooping; L. lanc., sess., serrate. A. 8-9. *Wat. pl.*—*Yell.*
2. B. tripartita. Fl. nearly erect; lower L. 3-fid, stalked. A. 8-9. *Wat. pl.*—*Yell.*

249. Petasi'tes. Butter Bur.

1. P. vulgaris. F. flor. filiform; scape appearing before L. P. 3-4. *Wet pl.*—*Purp.*
2. † P. fragrans. Fragrant. F. flor. ligulate; L. appearing with scape. P. 10-3. *Waste gr.* !

250. Eupato'rium. Hemp-Agrimony.

1. E. cannabinum. L. 3-5-fid; segm. lanc., serrate; fl. in close term. corymbs. P. 7-8. *Si. of riv. and dit.*—*Pk.*

251. Linosy'ris. Goldilocks.

1. L. vulgaris. St. leafy, erect; L. linear, dotted; fl. corymbose. P. 8-9. *Rocks by sea.*—*Yell.*

252. Antenna'ria. Pearly Everlasting.

1. A. dioica. Branches procumbent; st. erect, short, simple; fl. 3-5 together; lower L. obovate or oblong; st.-L. linear. P. 6-7. *Mtn. hea.*—*Rose or wh.*
2. † A. margaritacea. St. erect, branched above; L. linear-lanc.; fl. many, corymbose. P. 8. *Damp mead.*!—*Yell. and wh.*

253. GNAPHA'LIUM. Cudweed.

* *Inv. yell. or straw-coloured.*

1. **G. lutteo-album.** St. ascending or erect, cottony; L. linear or linear-oblong, cottony; fl. in a dense corymb. **A.** 7-8. *S. Eng. and Ch. Is.*!—*Yell.*

** *Inv. sc. brown; st. simple, erect or nearly so.*

2. **G. sylvaticum.** Fl. axillar, solitary or clustered, forming a leafy spike; L. linear, glabrous above, cottony beneath. **P.** 7-9. *Dry past. and wds.*
3. **G. norvegicum.** Fl. in a short term., close, leafy spike; L. lanc., cottony on both sides. **P.** 8-9. *Sco. Alps.*!

*** *Inv. sc. brown; st. branched, more or less decumbent.*

4. **G. supinum.** Tufted; fl. st. erect, 1-5-fld., 1-2 inches high; heads sess.; L. linear, downy on both sides. **P.** 7. *Sco. Alps.*
5. **G. uliginosum.** St. spreading, much branched; L. linear, cottony on both sides; fl. clustered at ends of branches. **A.** 8-9. *Fds. and damp pl.*

254. FILA'GO. Cud-weed. Herba Impia.

* *Clusters lax, of 2-7-fl.; outer sc. of inv. awnless.*

1. **F. minima.** St. forked, usually erect; L. linear-lanc., flat; upper L. not longer than fl. **A.** 7-8. *San. pl.*—*Whitish-yell.*
2. **F. gallica.** St. forked, erect; L. linear, revolute, upper L. longer than fl. **A.** 7-8. *Dry grav. pl.*!—*Wh.-yell.*

** *Head globose or flattened, woolly, in which 8-40-fl. are more or less imbedded.*

3. **F. germanica.** L. lanc., acute, heads 20-40-fld; st. with branches springing from beneath term. head. **A.** 7-9. *Grav. fds.*
4. **F. apiculata.** L. oblong, obtuse, apiculate, greenish; heads 10-20-fld.; sc. of inv. tipped with purp. or red; st. with branches springing from beneath term. head. **A.** 7-9. *Fds.*!
5. **F. spathulata.** L. oblong-spathulate; heads hemispherical or flattened, 8-18-fld, less cottony; sc. of inv. tipped with yell. **A.** 8-9. *Fds.*!

255. AS'TER. Sea Star-wort.

1. **A. Tripolium.** St. erect; L. lanc., entire, fleshy. **P.** 7-9. *Salt mar.*—*Blue.*

256. ERI'GERON. Fleabane.

1. † **E. canadensis.** St. branched; fl. small, numerous, in a long pan.; L. linear, fringed. **A.** 8-9. *Waste grd.*!—*Yell.-wh.*

2. E. acris. St. usually branched; branches 1-fld.; L. lanc. or linear; flor. of ray slightly longer than inv. B. 7-8. *Dry pl.—Yell. and Blue.*
3. E. alpinus. St. unbranched erect; fl. 1 (rarely 2 or 3); L. lanc. or oblong; flor. of ray twice as long as inv. P. 7-8. *Sco. Mtns.*

257. TUSSILA GO. Coltsfoot.

1. T. Farfara. Radiate flor. filiform; L. cordate-angular, cottony beneath. P. 3-4. *Clay soil.—Yell.*

258. SOLIDA'GO. Golden Rod.

1. S. Virgaurea. Root-L. obovate, stalked, serrate; upper lanc.; st. erect; fl. panicled. P. 7-9. *Hea. and Wds.—Yell.*

259. I'NULA. Elecampane.

1. I. Helenium. Root-L. ov. or oblong, large, stalked, upper clasping; Fl. large, mostly solitary; sc. of inv. broadly ov. P. 7-8. *Hedg. and past.—Yell.*
2. I. Conyza. L. ov. or ov.-lanc.; fl. ov.-cylind., corymbose, scarcely radiate; inner sc. of inv. linear. P. 7-8. *Wds. and Hedg.—Yellowish.* Ploughman's Spikenard.
3. I. crithmoides. L. linear, fleshy, 3-toothed at end. P. 7-8. *Sea sh.*!—*Yell.*

260. PULICA'RIA. Fleabane.

1. P. dysenterica. L. oblong, clasping, woolly; radiate flor. linear, much longer than those of disk; outer pappus cup-like. P. 7-9. *Damp. pl.—Yell.*
2. P. vulgaris. L. lanc., scarcely clasping; radiate flor. scarcely longer than those of disk; outer sc. of pappus minute, somewhat bristly, torn. P. 7-8. *Damp pl.—Yell.*

261. SENE'CIO. Rag-wort.

* *No radiate flor.*

1. S. vulgaris. L. pinnatifid, ½-clasping. A. 1-12. *Waste gr.—Yell.* Groundsel.

** *Radiate flor. revolute; L. pinnatifid.*

3. S. viscosus. L. clammy; outer sc. of inv. 2 or 3, lax, ¼ as long as inner, inner 20; achenes glabrous. A. 6-10. *Waste gr.—Yell.*
3. S. sylvaticus. L. not clammy; outer sc. of inv. very minute, inner 12-14; achenes silky. A. 7-8. *Dry pl.—Yell.*

*** *Fl. radiate; radiate flor. spreading; L. more or less lyrate.*

4. S. Jacobæa. Lower L. lyrate, bipinnatifid, glabrous; achenes of the disk hairy. P. 7-9. *Ro. si.—Yell.*

5. **S. aquaticus.** L. lyrate, glabrous; achenes all glabrous. P. 7-9. *Mar.—Yell.*

**** *Fl. radiate; radiate flor. spreading; L. pinnatifid, never lyrate.*

6. † **S. squalidus.** L. and st. glabrous; achenes silky. A. 6-10. *Walls.*!—*Yell.*
7. **S. Erucæfolius.** Whole pl. more or less cottony; achenes hairy. P. 7-8. *Bks., etc.—Yell.*

***** *L. simple, lanc., serrate; st. 2-6 ft. high.*

8. **S. paludosus.** L. woolly beneath; st. hollow, somewhat woolly. P. 6-7. *Fens.*!—*Yell.*
9. **S. Saracenicus.** L. glabrous; st. solid, glabrous. P. 7-8. *Wat. pl.—Yell.*

262. CINERA'RIA. Flea-wort.

1. **C. palustris.** St. branched, hollow, woolly; st.-L. lanc., lower sinuate; achenes glabrous. P. 6-7. *Fens.*!—*Yell.*
2. **C. campestris.** St. simple, downy; st.-L. lanc., root-L. oblong, all nearly entire; achenes downy. P. 5-6. *Chalky hills.—Yell.*

263. DORO'NICUM. Leopard's Bane.

1. † **D. Pardalianches.** L. cordate, uppermost sess., the rest on auricled petioles; st. 3-5-fld. P. 6-7. *Wds., etc.—Yell.*
2. † **D. plantagineum.** L. ov.; st.-L. sess., the lowest *only* petioled; st. usually 1-fld. P. 5-6. *Wds., etc.—Yell.*

264. MATRICA'RIA. Chamomile Feverfew.

1. **M. Chamomilla.** L. bi-tripinnatifid. A. 6-10. *Cult. and waste grd.—1 h.*

265. BE'LLIS. Daisy.

1. **B. perennis.** Scape 1-fld.; L. all radical, obovate. P. 3-10. *Mead.—Wh.*

266. CHRYSAN'THEMUM. Chrysanthemum.

1. **C. Leucanthemum.** Fl. white; st. simple, 1-fld.; st.-L. narrow, sess., cut, clasping. P. 6-7. *Mead.*—Ox-eye Daisy.
2. **C. segetum.** Fl. yell.; st. branching; L. glabrous, clasping, lobed and toothed. A. 6-7. *Corn-fds.*—Corn Marygold.

267. PYRETH'RUM. Feverfew.

1. **P. Parthenium.** L. pinnate; lts. ov., pinnatifid; fl. in a corymb. P. 6-8. *Waste grd.—Wh.*

2. **P. inodorum.** L. very compound; segm. capillary; st. branched; fl. solitary, at the ends of branches. P. 8-9. *Ro. si., etc.*—*Wh.*

268. TANACE'TUM. Tansy.

1. **T. vulgare.** L. bipinnatifid, serrate; fl. in a corymb. P. 8. *Fds. and waste pl.*—*Yell.*

269. ARTEMIS'IA. Wormwood.

* *Recept. hairy.*

1. **A. Absinthium.** Fl. hemispherical, drooping; L. cut into many segm.; whole pl. greyish. P. 8. *Waste pl.*—*Yell.*

** *Recept. naked.*

2. **A. campestris.** St. procumbent before flowering, afterwards ascending; fl. small, drooping; L. cut into many linear segm., green above, silky beneath; inv. not cottony. P. 8. *Hea.*!—*Yell.*
3. **A. maritima.** St. erect or ascending; fl. of 3-5-flor., drooping, in one variety erect; L. pinnate or bipinnate; segm. narrow, linear; whole pl. white and cottony. P. 8-9. *Sea Co.*—*Yell.*
4. **A. vulgaris.** St. erect; fl. erect; L. pinnatifid or bipinnatifid; segm. lanc., green above, cottony beneath. P. 7-8. *Hedg.*—*Purplish.*

270. AN'THEMIS. Chamomile.

* *Radiate flor. yell.*

1. **A. tinctoria.** L. bipinnatifid, cottony beneath. P. 7-8. *Fds.*! —*Yell.*

** *Radiate flor. wh.*; *recept. conical (except in A. anglica).*

2. **A. nobilis.** Procumbent; flowering branches ascending; sc. of recept. obtuse; L. bipinnate; segm. linear, semi-cylind. P. 7-8. *Hea.*—*Wh.*
3. **A. arvensis.** Pl. erect or decumbent, hoary; sc. of recept. lanc., acute; achenes 4-angled. A. 6-7. *Corn fds.*—*Wh.*
4. **A. Cotula.** Pl. erect, glabrous; sc. of recept. setaceous; flor. of ray without any trace of a style; achenes terete. A. 6-8. *Corn fds.*—*Wh.*
5. † **A. anglica.** St. prostrate; L. pinnatifid; lobes toothed, bristle-pointed, rather fleshy; recept. flat. A. 7. *Sea Co.*!—*Wh.*

271. ANACY'CLUS. Anacyclus.

1. † **A. radiatus.** Radiate flor. yell.; flor. of disk with 2 teeth longer than rest. A. 7. *Irel.*!—*Yell.*

272. ACHILLE'A. Yarrow.

* *L. simple, linear-lanc.*

1. **A. Ptarmica.** L. acute, glabrous, sharply serrate. P. 7-9. *Damp pl.—Wh.*
2. † **A. decolorans.** L. obtuse, downy, coarsely serrate, pectinate at base. P. 9. *Hills!—Yell.*

** *L. pinnatifid or bipinnatifid; fl. in dense corymbs.*

3. **A. tomentosa.** Fl. yell.; L. pinnatifid; segm. crowded, entire or 3-fid. P. 7-8. *Hills.!*
4. **A. millefolium.** Fl. wh. or pk.; L. bipinnatifid; lobes cut into very small, acute, narrow-linear segm. P. 6-8. *Past. etc.*
5. **A. tanacetifolia.** L. pinnatifid, sometimes bipinnatifid, lobes lanc., irregularly and sharply serrate; midrib bordered, serrate. P. 7. *Hills!—Yellowish wh.*

273. DIO'TIS. Cotton Weed.

1. **D. maritima.** St. decumbent and ascending; Fl. corymbose; L. nearly oblong, sess., alt.; whole pl. very cottony. P. 8-9. *San. sh.!—Yell.*

274. XAN'THIUM. Bur Weed.

1. **X. Strumarium.** L. cordate, toothed; M. fl. in a term. rac.; F. fl. below. A. 8-9. *Waste gr.!—Gr.*

ORDER 47.—ERICACEÆ.

275. AR'BUTUS. Strawberry Tree.

1. **A. Unedo.** L. ov. or ov.-lanc., glabrous, stiff, serrate; pan. small, term., drooping; berries large, crims. T. or Sh. 9. *Irel.!—Greenish-wh.*

276. ARCTOSTAPH'YLOS. Bear-berry.

1. **A. alpina.** L. obovate, serrate, annual; berry black. Sh. 5-6. *Sco. mtns.—Wh.*
2. **A. Uva ursi.** L. obovate, entire, evergreen (like those of box); berry scarlet. Sh. 6. *Mtn. hea.—Rose.*

277. VACCIN'IUM. Whortle-berry.

* *L. evergreen; fl. in a term. rac.; st. straggling or procumbent.*

1. **V. Vitis Idæa.** L. obovate, dotted beneath, margin revolute, (like those of box). Sh. 3-4. *Mtns.—Pk.*

** *L. annual, deciduous; ped. 1-fld.; st. erect, or decumbent at base.*

2. **V. Myrtillus.** L. ov., serrate; st. 4-angled; fl. solitary. Sh. 5. *Hea.—Reddish-gr.*

3. **V. uliginosum.** L. obovate, entire; st. terete; fl. clustered. Sh. 5. *Mtn. Hea.—Flesh.*

278. OXYCOC'COS. Cranberry.

1. **O. palustris.** L. ov., evergreen, very small, with revolute margins. Sh. 6-7. *Bogs.—Rose.*

279. DABEO'CIA. St. Dabeoc's Heath.

1. **D. polifolia.** L. ov., margin recurved, wh. beneath; fl. drooping, large, in a term. rac. Sh. 6-8. *Ir. hea.—Purp., pk. or wh.*

280. ANDROM'EDA. Andromeda. Wild Rosemary.

1. **A. polifolia.** L. ov.-lanc. or lanc., margin revolute; fl. in a term. cluster. Sh. 6. *Wet hea.—Ir.*

281. PHYLLO'DOCE. Phyllodoce.

1. **P. cerulea.** L. linear, crowded, green on both sides; fl. 4 or 5, term., drooping. Sh. 6-7. *Sco. hea.!—Blue-purp.*

282. AZA'LEA. Azalea.

1. **A. procumbens.** L. numerous, evergreen, ov. or oblong, edges revolute; fl. small in term. clusters. Sh. 5-6. *Mtns.—Rose.*

283. CALLU'NA. Ling.

1. **C. vulgaris.** L. minute, sagittate, tiled in 4 rows. P. 7-8. *Hea.—Rose or wh.*

284. ERI'CA. Heath.

* *Stam. not longer than cor.; L. 4 in a whorl.*

1. **E. Tetralix.** Fl. in a term. umbellate cluster; L. linear, margin revolute, ciliate at edge; style not longer than cor. P. 7-8. *Moist hea.—Flesh.*

2. **E. Mackaiana.** Fl. in a term. umbellate cluster; L. ov., margins revolute, ciliate at edge; style protruded. P. 8-9. *Ir. hea.—Purplish.*

3. **E. ciliaris.** Fl. in a secund rac; L. ov., ciliate. P. 6-7. *Hea., S. W. Eng.!—Purp.*

** *Stam. not longer than cor. L. 3 in a whorl.*

4 **E. cinerea.** L. linear, glabrous; fl. in a dense term. rac. P. 7-8. *Hea.—Purp.*

E. Ciliaris (3). Rac. secund; L. ciliate.

*** *Stam. protruding from cor.*; *L.* 4 *(rarely* 3*) in a whorl, glabrous.*

5. **E. mediterranea.** Fl. ov.-cylind.; L. linear, channelled beneath; fl. in close, term., leafy rac. P. 4. *Ir. bogs!—Flesh.*
6. **E. vagans.** Fl. bell-shaped; L. linear; fl. axillar, crowded at the middle or toward end of the branches. P. 7-8. *Hea. S. W. Eng. and Ir.—Red or wh.*

285. MONE'SES. One-flowered Winter Green.

1. **M. grandiflora.** L. ov., acute, serrate; fl. large, drooping. P. 7. *Sco. Alp. was.!—Wh.*

286. PY'ROLA. Winter Green.

* *L. ov., serrate; style much longer than cor.*

1. **P. secunda.** Fl. small, drooping, in a 1-sided rac. P. 7-8. *Alp. wds.—Wh.*

** *L. roundish-oval or orbicular, obtuse, entire or crenate.*

2. **P. rotundifolia.** Style curved, twice as long as stam. P. 7-8. *Wet wds.—Wh.*
3. **P. media.** Style nearly straight, twice as long as stam. P. 7-8. *Wds.—Pky. wh.*
4. **P. minor.** Style not longer than stam.; stig. large, 5-rayed. P. 7-8. *Wds., etc.—Pale rose.*

287. MONOT'ROPA. Bird's Nest.

1. **M. Hypopitys.** Fl. in a nodding rac.; lateral fl. with 8 stam., term. with 10; whole pl. yellowish. P. 7-8. *Wds.*

ORDER 48.—ILICACEÆ.

288. I'LEX. Holly.

1. **I. aquifolium.** L. ov., evergreen, mostly thorny. T. 5. *Hedg. —Wh.*

ORDER 49.—JASMINACEÆ.

289. LIGUS'TRUM. Privet.

1. **L. vulgare.** L. elliptic-lanc., entire; fl. in crowded term. pan. Sh. 5-7. *Hedg. and thickets.—Wh.*

290. FRAX'INUS. Ash.

1. **F. excelsior.** L. pinnate; fl. in clusters or pan. T. 3-5. *Wds. and Hedg.*

ORDER 50.—APOCYNACEÆ.

291. VIN'CA. Periwinkle.

1. **V. minor.** St. procumbent; L. ov.-lanc. or oblong, glabrous. P. 5. *Hedg.—Blue.*
2. † **V. major.** Flowering st. erect or ascending; bar. branches procumbent; L. ov., ciliate. P. 5. *Hedg.—Blue.*

ORDER 51.—GENTIANACEÆ.

292. CHLO'RA. Yellow Wort.

1. **C. perfoliata.** St.-L. perfoliate, glaucous; fl. many, in term. cymes. A. 7-8. *Calc. soil.—Yell.*

293. VILLAR'SIA. Yellow Buck-bean.

1. **V. nymphæoides.** L. orbicular-cordate, on long, narrow petioles, floating; fl. axillar. P. 7-8. *Riv. and ponds.—Yell.*

294. MENYAN'THES. Buck-bean.

1. **M. trifoliata.** Lts. obovate; fl. in an erect rac. P. 5-6. *Bogs. —Wh. and pk.*

295. CICEN'DIA. Marsh Centaury.

1. **C. filiformis.** St. filiform, forked; L. linear-lanc.; teeth of cal. ov., acute. A. 6-8. *Wet San. Pl.—Yell.*
2. **C. Candollei.** St. much branched; L. linear-lanc.; teeth of cal. linear. A. 6-7. *Ch. Is.* !—*Pk.*

296. ERYTHRÆ'A. Centaury.

* *Tube of opening cor. twice as long as cal.*

1. **E. Centaurium.** Fl. in a forked, corymbose pan.; L. oblong. A. 6-8. *Past. and wds.—Rose.*

** *Tube of cor. scarcely longer than cal.*

2. **E. pulchella.** St. usually much branched above, rarely simple and 1-fid; fl. all stalked in a forked pan.; L. ov. or lanc. A. 8-9. *Sea Co.—Deep rose.*
3. **E. latifolia.** St. short, branched from near base; fl. sess., in dense forked tufts; lower L. broadly ov., 5-7-ribbed A. 6-8. *Sea Co.—Rose.*
4. **E. littoralis.** St. simple, or branched from root; fl. sess., corymbose; root-L. spathulate; st.-L. linear. A. 6-8. *Sea Co.—Rose.*

297. GENTIA'NA. Gentian.

* *Throat of cor. hairy inside.*

1. **G. amarella.** Cor. 5-fid, rarely 4-fid; cal. with 5 equal segm. **A.** 8-9. *Calc. past.—Purp. or greenish.*
2. **G. campestris.** Cor. 4-fid; cal. with 4 segm., 2 much larger than rest. **A.** 8-10. *Calc. hills.—Blue.*

** *Throat of cor. hairless; cor. salver-shaped, with 5 larger segm. and 5 small 2-fid ones between them.*

3. **G. nivalis.** St. slightly branched or simple, erect, branches 1-fid.; L. ov., opp. **A.** 8. *Sco. Alps.*!—*Blue.*
4. **G. verna.** St. tufted, simple, 1-fid.; L. ov.; root-L. in a rosette. **P.** 4. *Hills.—Blue.*

*** *Throat of cor hairless; cor. bell-shaped, 5-fid.*

5. **G. Pneumonanthe.** L. linear; fl. usually solitary. **A.** 8-9. *Damp Hea.—Deep blue.*

ORDER 52.—POLEMONIACEÆ.

298. POLEMO'NIUM. Jacob's Ladder.

1. **P. cerulęum.** Lts. ov.-lanc.; st. angular, erect. **P.** 7. *Bushy pl.—Blue or wh.*

ORDER 53.—CONVOLVULACEÆ.

299. CUS'CUTA. Dodder.

1. **C. Europæa.** Sc. inside cor. 2-fid., adpressed; heads many-fid.; cal. much shorter than cor. **A.** 8-9. *On nettles, etc.—Yellowish.*
2. **C. Epithymum.** Sc. inside cor. palmately cut, nearly closing the tube; cal. much shorter than tube of cor. **A.** 7-9. *On hea., etc.—Pk. or wh.*
3. † **C. Trifolii.** Sc. inside cor. palmately cut; tube of cor. cylind.; heads many fid.; cal. nearly as long as tube of cor. **A.** 7-9. *On clover.—Wh. or Yellowish.*
4. † **C. Epilinum.** Sc. inside cor. palmately cut; tube of cor. globose; heads few-(about 5-) fid; cal. nearly as long as tube of cor. **A.** 8. *On flax.—Wh.*

300. CALYSTE'GIA. Bind Weed.

1. **C. Sepium.** St. climbing; L. ov.-cordate, somewhat sagittate and angular at base; bracts cordate; fl. large. **P.** 7-8. *Hedg.—Wh.*
2. **C. Soldanella.** St. prostrate, short; L. small, reniform, fleshy; bracts ov.; fl. large. **P.** 6-7. *Sea sh.—Rose.*

301. CONVOL'VULUS. Bind Weed.

1. C. arvensis. L. sagittate; bracts linear, small. P. 6-8. *Hedg. —Pk. or wh.*

ORDER 54.—SOLANACEÆ.

302. SOLA'NUM. Nightshade.

1. S. Dulcamara. Shrubby, climbing; upper L. hastate, the rest ov.; fl. in lax corymbs; berries oval, red. Sh. 6-8. *Hedg.—Purp.*
2. S. nigrum. Herbaceous; L. ov., toothed; fl. in lateral umb.; berries globose, black, rarely red. A. 6-9. *Waste gr.—Wh.*

303. AT'ROPA. Deadly Nightshade.

1. A. Belladonna. L. large, ov., entire. P. 6. *Waste pl.—Dull purp.*

304. DATU'RA. Thorn Apple.

1. † D. Stramonium. L. large, ov., toothed, glabrous. A. 7. *Waste pl.—Wh.*

305. HYOSCY'AMUS. Henbane.

1. H. niger. L. sess., clasping, sinuately lobed, covered with long clammy hairs. A. or B. 6-8. *Waste pl.—Yellowish.*

ORDER 55.—SCROPHULARIACEÆ.

306. VERONI'CA. Speedwell.

* *Fl. in the axils of bracts which are gradually diminished from true L. and differ from them in shape, forming a term. leafy spike.*

1. V. serpyllifolia. St. herbaceous, decumbent at base; L. ov., entire, glabrous, nearly sess.; rac. many-fld. P. 5-7. *Past. and ro. si.—Pale blue.*
2. V. verna. Lower L. ov., serrate; st.-L. pinnatifid; ped. very short. A. 4-5. *San. pl.!—Blue.*
3. V. triphyllos. Lower L. ov.; st.-L. digitate, 3-5- or 7-fid; ped. longer than cal. A. 4. *San. pl. !—Blue.*
4. V. peregrina. Erect, glabrous; lower L. obovate-oblong, upper linear-oblong, all cuneate at base; fl. sess.; caps. obcordate. A. 4-5. *Ch. Is.!*
5. V. arvensis. Lower L. ov., serrate; upper L. lanc., entire. A. 4-6. *Walls and fds.—Blue.*

** *Fl. few, (3-12) in the axils of bracts, which scarcely differ in shape from true L., forming a very short term. rac. or corymb.*

6. **V. saxatilis.** L. obovate or oblong, glabrous; st. decumbent, shrubby at base; fl. few; caps. ov. **P.** 7. *Sco. Alps.—Blue.*
7. **V. alpina.** L. ov.; st. erect, herbaceous; rac. usually 4-5-fid., hairy; caps. obovate, notched. **P.** 7-8. *Sco. alps.—Blue or pk.*

*** *Fl. in term. leafless spikes or rac.*

8. **V. spicata.** L. ov. or lanc., downy, bluntly serrate; spikes long, dense; st. erect. **P.** 7-9. *Calc. rocks and hea.—Blue.*

**** *Fl. in lateral, axillar rac.; L. sess., lanc. or linear-lanc., glabrous.*

9. **V. scutellata.** L. linear-lanc.; rac. alt. (sometimes nearly opp.); caps. flat, of 2 orbicular lobes. **P.** 6-8. *Wet pl.—Flesh.*
10. **V. anagallis.** L. lanc.; rac. opp.; caps. ov.; st. erect, stoutish, hollow. **P.** 6-9. *Dit. and Wet pl.—Blue.*

***** *Fl. in lateral axillar rac.; L. ov. or elliptic.*

11. **V. Beccabunga.** L. oval, sess., glabrous; st. decumbent. **P.** 5-9. *Wat. pl.—Blue.*
12. **V. Chamædrys.** Rac. opp.; L. nearly sess., ov., or cordate, crenate, hairy; st. with 2 lines of hairs; caps. shorter than cal. **P.** 5-6. *Bks. and mead.—Blue.*
13. **V. montana.** Rac. alternate, rarely opp.; L. stalked, ov., hairy, serrate; st. hairy all round; caps. very flat, orbicular, ciliate, much larger than cal. **P.** 5-6. *Wds.—Pale blue.*
14. **V. officinalis.** Rac. alt., rarely opp.; L. oval, hairy, serrate; fl. sess., or nearly so; caps. somewhat narrowed at base, triangular. **P.** 5-7. *Hea. etc.—Blue or flesh.*

****** *Fl. solitary, axillar.*

15. **V. hederifolia.** L. broadly cordate, 5-7-lobed; sep. cordate, ciliate. **A.** 3-9. *Cult. fds.—Blue.*
16. **V. polita.** L. cordate-ov., serrate; sep. broadly ov., acute; seeds 8-10 in each cell. **A.** 4-9. *Cult. grd.—Blue.*
17. **V. agrestis.** L. cordate-ov., serrate,; sep. oblong, obtuse; seeds 6 in each cell. **A.** 4-9. *Cult. grd.—Blue or wh.*
18. † **V. Buxbaumii.** L. cordate-ov., serrate; sep. lanc., acute; fl. large; caps. sharply keeled. **A.** 4-7. *Cult. grd.—Bright blue.*

307. RHINAN'THUS. Yellow Rattle.

1. **R. Crista Galli.** L. narrow-oblong, serrate; spikes loose; lateral segm. of upper lip of cor. short, roundish. **A.** 6. *Mead.—Yell.*

2. **R. major.** L. linear-lanc., serrate; spikes close; lateral segm. of upper lip of cor. oblong. **A.** 7. *Corn-fds., N. Eng.—Yell.*

308. MELAMPY'RUM. Cow Wheat.

* *Fl. in distant pairs, secund, in the axils of L., especially the upper ones.*

1. **M. pratense.** Cor. closed, 4 times as long as cal.; upper L. toothed at base. **A.** 5-8. *Wds.—Yell.*
2. **M. sylvaticum.** Cor. open, twice as long as cal.; L. linear, entire. **A.** 7. *Mtn. wds.—Yell.*

** *Fl. in term. spikes; L. linear or linear-lanc.*

3. **M. cristatum.** Spikes 4-angled; bracts cordate, coloured, pectinate-toothed at base, with a long, linear, entire, leafy termination. **A.** 7. *Wds. etc.—Yell. or purp.*
4. **M. arvense.** Spikes rather lax, oblong; bracts lanc., pinnatifidly toothed. **A.** 7. *Corn fds.—Yell. and purp.*

309. BART'SIA. Bartsia.

1. **B. alpina.** L. ov., opp.; st. 4-angled, unbranched, hairy; fl. in a short leafy spike. **P.** 7. *Mtn. past.—Purplish blue.*
2. **B. viscosa.** L. lanc., serrate, lower opp., upper alt.; whole pl. covered with clammy hairs. **A.** 7-8. *Mar.—Yell.*
3. **B. Odontites.** L. lanc., serrate; fl. in secund rac.; st. usually branched. **A.** 6-8. *Damp pl.—Red.*

310. EUPHRA'SIA. Eyebright.

1. **E. officinalis.** L. ov., or cordate-ov., toothed; fl. axillar. **A.** 5-9. *Damp past.—Wh.*

311. SIBTHOR'PIA. Sibthorpia.

1. **S. Europæa.** L. crenate or lobed; fl. axillar. **P.** 7-9. *Damp sha. pl.—Pinky-wh.*

312. LINA'RIA. Toad Flax.

* *St. prostrate; L. glabrous.*

1. † **L. Cymbalaria.** L. cordate, 5-lobed; fl. axillar, solitary. **P.** 5-11. *Walls.—Pale purp.*

** *St. prostrate, (the centre one sometimes short, erect); L. hairy.*

2. **L. spuria.** L. all ov., alt., entire. **A.** 7-9. *Corn fds.—Yell. and purp.*
3. **L. Elatine.** Upper L. ov.-hastate, acute. **A.** 7-9. *Corn fds.—Yell. and purp.*

*** *St. decumbent, ascending or erect; fl. yell., in a close term. rac.; L. linear, glabrous.*

4. **L. vulgaris.** St. erect; L. scattered; sep. ov. P. 6-8. *Hedg. etc.*
5. **L. supina.** St. spréading, decumbent at base; lower L. 4-5 in a whorl; sep. linear. P. 6-9. *S. Eng.—Yell.*

**** *St. usually erect; fl. purp. or blue; L. hairy; fl. axillar, solitary.*

6. **L. minor.** Pl. clammy; L. lanc., obtuse. A. 6-9. *Dry fds.—Purplish.*

***** *St. usually erect; fl. purp. or blue; L. glabrous; fl. racemose.*

7. **L. repens.** Fl. wh. or pale purp., with blue veins; spur as long as sep. P. 7-9. *Near sea.*
8. **L. pelisseriana.** Fl. purp., with darker veins; spur much longer than sep. A. 6. *Ch. Is.* !
9. † **L. purpurea.** Fl. purp. or yell. and purp.; spur curved, as long as cor. P. 6-7. *Waste Pl.* !

313. ANTIRRHI'NUM. Snap Dragon.

1. † **A. majus.** Sep. ov., obtuse, much shorter than cor. P. 6-7. *Old walls.—Rose.*
2. **A. orontium.** Sep. linear-lanc., as long or longer than cor.; A. 7-8. *Dry fds.—Rose.*

314. LIMOSEL'LA. Mud-wort.

1. **L. aquatica.** L. lanc.-spathulate, on long petioles; fl. axillar, minute; st. 0. A. 7-9. *Wat. pl.—Wh. or rose.*

315. DIGITA'LIS. Foxglove.

1. **D. purpurea.** L. ov. or ov.-lanc., crenate. B. 7-9. *Hilly past. —Rose.*

316. PEDICULA'RIS. Louse-wort.

1. **P. sylvatica.** St. erect, very short, branches prostrate; cal. 5-lobed, glabrous. P. 5-7. *Damp past.—Rose.*
2. **P. palustris.** St. erect, branched, branches spreading or ascending; cal. 2-lobed, downy. A. 6-7. *Bogs.—Rose.*

317. MI'MULUS. Monkey Flower.

1. † **M. luteus.** St. creeping; flowering branches ascending; L. roundish-ov. P. 6-9. *Damp pl.*!—*Yell.*

318. SCROPHULA'RIA. Fig-wort.

* *No scale inside the upper lip; fl. yell.*

1. **S. vernalis.** L. cordate-orbicular, toothed. B. 4-5. *Hedg. and thickets.* !

** *Upper lip with an entire scale inside; fl. purplish.*

2. S. aquatica. St. winged; L. cordate-oblong, toothed, glabrous; fl. panicled. P. 7-8. *Wet pl.*
3. S. scorodonia. St. not winged; L. cordate, downy, toothed. P. 7-8. *Moist pl.* !.

*** *Upper lip with a notched sc. inside; fl. purplish; L. glabrous, cordate-ov., acute, sharply serrate.*

4. S. nodosa. St. not winged; cor.-scale slightly notched. P. 6-7. *Wds. and Hedg.*
5. S. Ehrharti. St. winged; cor.-sc. cleft. P. 8-9. *Wet pl.*

319. VERBAS'CUM. Mullein.

* *L. strongly decurrent; fl. in dense spikes; 3 shorter fil. hairy.*

1. V. Thapsus. L. oblong, flannelly; cor. twice as long as cal. B. 7-8. *Ro. si., etc.—Yell.*

** *L. not decurrent, clothed with mealy wool; ped. of fl. clustered; hairs of fil. wh.*

2. V. Lychnitis. Upper side of L. nearly glabrous, under mealy; st. angular. B. 7-8. *Ro. si.* !—*Crm.*
3. V. floccosum. L. mealy on both sides; mealy wool easily rubbed off; st. terete. B. 7. *Ro. si.* !—*Yell.*

*** *L. not decurrent, without mealy wool; ped. more or less clustered, rarely solitary; hairs of fil. purp.*

4. V. nigrum. Lower L. cordate-ov., stalked, more or less downy; ped. twice as long as cal. P. 7-8. *Ro. si.—Yell.*
5. V. virgatum. L. nearly or quite glabrous, upper sess., somewhat clasping; ped. 2-6 together, shorter than cal. B. 8. *Bks.* !—*Yell.*

**** *L. not decurrent; fl. solitary, (rarely 2 together); hairs of fil. purp.*

6. V. Blattaria. L. oblong, crenate, glabrous (or slightly glandular-hairy), somewhat clasping. B. 8. *Bks.* !—*Yell. or wh.*

ORDER 56.—OROBANCHACEÆ.

320. OROBAN'CHE. Broom Rape.

* *Bracts 3 together; sep. 4 or 5.*

1. O. arenaria. Sep. 5; lobes of lower lip of cor. obtuse. P. 7-8. *Ch. Is.* !—*Bluish.*
2. O. cerulea. Sep. 5; lobes of lower lip of cor. acute. P. 7. *On Yarrow* !—*Bluish-purp.*

3. † **O. ramosa.** Sep. 4; st. often branched. P. 8-9. *On Hemp*! —*Bluish.*

** *Bracts single; sep.* 2.; *stig. yell. or yellowish-brown.*

4. **O. major.** Pl. brown; style downy; stam. glabrous below; sep. 2-fid. P. 6-7. *Hea., etc.*
5. **O. elatior.** Bl. more or less yell.; style glabrous; stam. hairy below; sep. 2-fid. P. 7-8. *On Knap-weed.*!
6. **O. Hederæ.** Pl. purplish or brown; style nearly glabrous; sep. entire. P. 7-8. *On Ivy*!

*** *Bracts single; sep.* 2.; *stig. pale red.*

7. **O. rubra.** Sep. entire; pl. brownish-red. P. 7-8. *On Thyme*!

**** *Bracts single; sep.* 2; *stig. purp. or purplish-black; style nearly glabrous; cor. tubular, narrowed.*

8. **O. amethystea.** Bluish; lobes of lower lip of cor. unequal; middle lobe largest. P. 6-7. *On Eryngo*!
9. **O. minor.** Yellowish, sometimes bluish; lobes of lower lip of cor. nearly equal. P. 7-8. *Clover-fds.*

***** *Bracts single; sep.* 2; *stig. purp. or purplish-black; style glandular-hairy; cor. more or less bell-shaped, dilated.*

10. **O. caryophyllacea.** Sep. 2-fid; upper lip 2-lobed. P. 7. *On Galium*!
11. **O. Picridis.** Sep. entire or with 2 filiform points at end; upper lip not lobed. A. 6-7. *On Picris*!

321. LATHRÆ'A. Tooth-wort.

1. **L. squamaria.** Fl. pendulous; sc. of st. ov., fleshy; whole pl. reddish-crm.-coloured. P. 4-5. *Wds.*

ORDER 57.—VERBENACEÆ.

322. VERBE'NA. Vervein.

1. **V. officinalis.** L. opp., pinnatifidly cut, upper L. oblong-lanc., serrate; st. erect; fl. in long spikes. P. 7-8. *Waste grd.*—*Pale lilac.*

ORDER 58.—LABIATÆ.

323. LY'COPUS. Gypsy Horehound.

1. **L. Europæus.** L. ov.-lanc., stalked, toothed or pinnatifid; fl. in axillar whorls. P. 7-8. *River bks.*—*Wh.*

324. SAL'VIA. Sage.

1. **S. pratensis.** L. mostly radical; root-L. ov.-cordate, stalked, upper lanc., acute; cor. large, 3 times as long as cal. P. 7. *Dry past.* !—*Blue.*
2. **S. verbenaca.** Root-L. oblong or ov., wrinkled, upper broadly cordate-clasping; tube of cor. about as long as cal. P. 7. *Dry bks.—Purp.*
3. **S. clandestina.** Root-L. oblong-cordate, stalked, upper oblong, acute, sess.; tube of cor. longer than cal.; fl. small. P. 7. *Dry bks.* !—*Purp.*

325. MEN'THA. Mint.

* *Cal. closed with hairs inside (when the blossom drops).*

1. **M. Pulegium.** Bar. st. prostrate; flowering st. prostrate or ascending; L. ov.-oblong, obtuse; fl. all in axillar whorls. P. 8-9. *Wat. pl.—Light purp.*—Pennyroyal.

** *Cal. not hairy inside; fl. in a thick term. head, and* 1 *or a few whorls below.*

2. **M. aquatica.** L. stalked, ov., serrate, hairy. P. 7-9. *Wet pl.—Lilac.*

*** *Cal. not hairy inside; fl. in term. spikes consisting of leafless bracteated whorls, more or less close.*

3. **M. rotundifolia.** L. oval or orbicular, obtuse, sess., whitish and woolly beneath. P. 8-9. *Damp pl.—Reddish.*
4. **M. sylvestris.** L. ov.-lanc., nearly sess., serrate, hoary; spikes often several together. P. 8-9. *Wet pl.—Lilac.*—Horse Mint.
5. **M. viridis.** L. sess., lanc., acute, serrate, glabrous; spikes taper. P. 8. *Wet pl.—Lilac.* Spear Mint.
6. **M. piperita.** L. shortly stalked, ov. or ov.-lanc., glabrous or nearly so; spikes short, obtuse. P. 8-9. *Wet pl.—Purp.*—Peppermint.

**** *Cal. not hairy inside; fl. in axillar, leafy whorls; the term. pair of L. usually without fl.*

7. **M. pratensis.** L. sess., ov.-lanc., serrate, glabrous. P. 8-9. *Wet pl.* !—*Lilac.*
8. **M. sativa.** L. ov., stalked, hairy; cal.-teeth lanc. P. 7-8. *Wet pl.—Lilac.*
9. **M. arvensis.** L. ov. or oval, stalked, hairy; cal.-teeth short, triangular. P. 6-9. *Corn-fds.—Lilac.*

326. THY'MUS. Thyme.

1. **T. Serpyllum.** St. wiry, procumbent; L. ov., fringed. P. 6-8. *Dry bks.—Rose.*

327. ORIG'ANUM. Marjoram.

1. O. vulgare. L. ov., stalked; bracts ov., purp. P. 7-8. *Dry pl.—Rose.*

328. TEU'CRIUM. Germander.

* *Fl. in leafless bracteated secund rac.*

1. T. Scorodonia. St. erect; fl. mostly in pairs. P. 7-8. *Dry pl. —Straw.*—Wood Sage.

** *Fl. in axillar whorls of 2 to 6 flowers.*

2. T. Scordium. St. nearly procumbent; L. oblong, toothed, hairy, sess. P. 7-8. *Wet mead.*!—*Purp.*
3. T. Chamædrys. St. ascending; L. ov.-cuneate, lower L. deeply toothed. P. 7. *Old walls*!—*Red-purp.*
4. T. Botrys. L. deeply 3-fid or pinnatifid; cal. swelled at base. A. 8-9. *Hills*!—*Lilac.*

329. AJ'UGA. Bugle.

* *Fl. yell., axillar, solitary, or in pairs.*

1. A. chamæpitys. L. deeply 3-fid, segm. linear. A. 4-5. *San. fds.*!—Ground Pine.

** *Fl. blue, rarely wh., in axillar whorls.*

2. A. reptans. St. erect, with creeping runners; L. obovate, glabrous, or nearly so. P. 5. *Wds. and mead.*
3. A. pyramidalis. St. erect; runners 0; L. obovate, hairy. P. 6. *N. Sco.*!

330. LEONU'RUS. Mother-wort.

1. † L. cardiaca. Upper L. cuneate-lanc., 3-lobed; uppermost sometimes entire, lower 5-lobed; fl. 6-15 in a whorl. P. 7-8. *Hedg.-Bks.*!—*Wh. or pk.*

331. GALEOB'DOLON. Weasel Snout.

1. G. luteum. L. ov., serrate, stalked. P. 4-6. *Wds.*—*Yell.*

332. BALLO'TA. Stinking Horehound.

1. B. nigra. L. ov.; cal.-teeth broad, short, reflexed. P. 7-9. *Hedg.—Purp. or wh.*

333. LA'MIUM. Dead Nettle.

* *Upper L. sess., clasping, orbicular- or reniform-cordate.*

1. L. amplexicaule. Tube of cor. much longer than cal.; cal. teeth gr., converging in fr.; fl. buds downy, carmine. A. 5-8. *Fds.—Crim.*

2. **L. intermedium.** Cal.-teeth purp., spreading. **A.** 6-9. *Waste pl.—Purp.*

** *L. all stalked, upper L. and whorls crowded at end of st.; fl. rather small.*

3. **L. purpureum.** L. cordate, crenate-toothed; tube of cor. with a hairy ring inside. **A.** 5-8. *Fds. and waste pl.—Red.*
4. **L. incisum.** L. cordate-triangular, deeply cut; tube of cor. naked inside. **A.** 5-8. *Fds. and waste pl.—Red.*

*** *L. all stalked, upper L. and whorls not crowded at end of st.; fl. rather large.*

5. **L. album.** L. cordate-ov.; fl. wh. **P.** 4-9. *Hedg. etc.*
6. † **L. maculatum.** L. cordate-ov., usually marked with wh.; fl. deep rose. **P.** 6-7. *Waste grd.* !

334. GALEOP'SIS. Hemp Nettle.

* *St. not swelled (or scarcely so) under the joints; cal-teeth not longer than its tube; hairs short and soft; L. ov-lanc.*

1. **G. Ladanum.** Fl. rose-purp.; upper lip of cor. slightly notched. **A.** 7-9. *Fds.*
2. **G. ochroleuca.** Fl. yell.; upper lip of cor. deeply notched. **A.** 7-8. *San. fds.* !

** *St. decidedly swelled under the joints; cal-teeth long, stiff; hairs long, stiff; L. oblong-ov.*

3. **G. Tetrahit.** Fl. rose or wh.; cor. twice as long as cal. **A.** 7-9. *Corn fds.*
4. **G. versicolor.** Fl. yell., large, with a large purp. spot on lower lip; cor. thrice as long as cal. **A.** 7-8. *Corn fds.*

335. STA'CHYS. Wound-wort.

* *Fl. yell.; L. varying from ov. to lanc.*

1. **S. annua.** Whorls 4-6-fld., spiked. **A.** 8-9. *Kent* !

** *Fl. red or purp.; L. ov.-lanc. or lanc.*

2. **S. palustris.** L. serrate, with short hairs; whorls 6-10-fld. **P.** 7. *Damp pl.*
3. **S. Germanica.** L. densely silky wh.; whorls many-fld. **P.** 7-9. *Corn fds.*

*** *Fl. red or purp.; L. cordate or ov., stalked.*

4. **S. arvensis.** L. ov. or cordate-ov., obtuse; cor. hardly longer than cal.; st. weak, often spreading. **A.** 4-10. *Corn-fds.—Pale lilac.*
5. **S. sylvatica.** L. cordate, acute, serrate; cor. much longer than cal.; whorls spiked. **P.** 7-8. *Hedg.—Purp.*

336. BETON'ICA. Wood Betony.

1. B. officinalis. Lower L. oblong, cordate at base, upper lanc., serrate. P. 7-8. *Wds., etc.—Purp.-red.*

337. NEP'ETA. Cat Mint.

1. N. Cataria. St. erect, branched; L. ov.-cordate, toothed, whitish; whorls densely spiked. P. 7-8. *Hedg.—Wh.*
2. N. Glechoma. St. procumbent; L. roundish-reniform, crenate; whorls 3-6-fld., axillar. P. 4-5. *Hedg. bks.—Blue.*—Ground Ivy.

338. MARRU'BIUM. Horehound.

1. M. vulgare. L. orbicular or ov. P. 7-9. *Dry grd. and hed.—Wh.*

339. CALAMIN'THA. Calamint.

* *Ped. simple; whorls about 6 fld.*

1. C. Acinos. L. ov., acute, small. A. 7-8. *Dry pl.—Violet.*

** *Ped. branched; whorls many-fld; L. ov.*

2. C. Nepeta. Teeth of cal. all nearly equal, subulate; L. about ¼ inch long. P. 8. *Bks.—Pale purp.*
3. C. officinalis. Teeth of upper lip of cal. equal, triangular, lanc., straight, lower subulate, twice as long. P. 8. *Ro. si. and bks.—Pale purp.*
4. C. sylvatica. Teeth of upper lip of cal.equal, lanc.-subulate, strongly bent back, lower subulate, twice as long; cor. an inch long. P. 8. *Wds.in S.!—Pale purp.*

*** *Ped. in dense crowded axillar whorls, with inv. of bristly bracts.*

5. C. Clinopodium. L. ov., hairy. P. 8-9. *Thickets.—Rose.*

340. MELIS'SA. Balm.

1. † M. officinalis. L. ov., serrate; whorls lax; bracts ov. P. 6-10. *Sha. pl.!—Wh.*

341. MELIT'TIS. Bastard Balm.

1. M. melissophyllum. L. cordate-ov., or ov.-lanc., serrate, hairy. P. 5-6. *Wds. S. Eng.—Crm. and purp.*

342. PRUNEL'LA. Self Heal.

1. P. vulgaris. L. ov. or oblong, stalked; bracts obcordate. P. 7-8. *Damp. grd.—Purp., pk., or wh.*

343. SCUTELLA'RIA. Scull Cap.

1. S. galericulata. L. oblong-lanc. P. 7-8. *By riv.—Blue.*

2. S. minor. Lower L. cordate-ov., upper lanc. P. 7-9. *Bogs.—Pk.*

ORDER 59.—BORAGINACEÆ.

344. E'CHIUM. Viper's Bugloss.

1. E. vulgare. L. lanc., narrowed below; stam. longer than cor. B. 6-8. *Dry pl.—Blue.*
2. E violaceum. L. oblong, broader and cordate at base; stam. about equal to cor. B. 6-9. *Ch. Is.*!—*Violet.*

345. MERTEN'SIA. Oyster Plant.

1. M. maritima. St. procumbent; L. ov. P. 5-6. *Near sea.—Purplish.*

346. PULMONA'RIA. Lung-wort.

1. P. officinalis. L. ov., or roundish-cordate, often spotted. P. 5. *Wds.*!—*Purp.*
2. P. angustifolia. L. all lanc. P. 3-5. *Wds.*!—*Purp.*

347. LITHOSPER'MUM. Gromwell.

* *Cor. wh. or yellowish, scarcely longer than cal.*

1. L. officinale. Carp. smooth; L. lanc. P. 5-7. *Wds. and dry pl.—Yellowish.*
2. L. arvense. Carp. wrinkled; L. lanc. A. 5-6. *Corn-fds.—Wh.*

** *Cor. blue, much longer than cal.*; *bar. st. creeping.*

3. L. purpuro-ceruleum. Carp. smooth; L. lanc., acute. P. 5-6. *Calc. thickets*!

348. BORA'GO. Borage.

1. † B. officinalis. Erect, branched; L. obovate or oblong, upper sess. B. 6-7. *Waste pl.—Blue.*

349. LYCOP'SIS. Bugloss.

1. L. arvensis. St. erect; L. lanc., wavy; fl. small. A. 6-7. *Fds. and hedg.—Blue.*

350. SYM'PHYTUM. Comfrey.

1. S. officinale. L. ov.-lanc., upper lanc., very decurrent, bristly-hairy. P. 5-6. *Damp grd.—Yell.-wh., or purplish.*
2. S. tuberosum. L. ov. or lanc., scarcely decurrent, mostly stalked; root tuberous. P. 6-7. *Damp pl.*!—*Yellowish wh.*

351. ASPERU'GO. Mad-wort.

1. A. procumbens. L. usually in threes; st. prostrate, angled, with reflexed bristles. A. 6-7. *Waste grd.*!—*Blue.*

352. CYNOGLOS'SUM. Hound's Tongue.

1. C. officinale. L. downy-hoary, lower ov.-lanc., stalked, upper lanc., clasping; fl. racemose, panicled. B. 5-7. *Ro. si. and waste grd.*—*Purp.*
2. C. sylvaticum. L. green, oblong-lanc., nearly glabrous and shining above, rough, with hard dots beneath. B. 6-7. *Shady lanes*!—*Blue.*

353. ANCHU'SA. Alkanet.

1. A. sempervirens. L. ov.; fl. in short, axillar, forked spikes. P. 5-7. *Waste pl.*!—*Blue.*
2. † A. officinalis. L. lanc.; fl. in term., forked spikes. P. 6-7. *Waste pl.* !—*Purp.*

354. MYOSO'TIS. Forget-me-not.

* *Cal. open in fr.; limb of cor. broader than length of tube.*

1. M. palustris. Hairs of st. spreading; teeth of cal. short, triangular; hairs of cal. straight, adpressed. P. 6-9. *Wat. pl.*—*Blue.*
2. M. repens. Hairs of st. spreading; teeth of cal. narrow-lanc.; hairs of cal. straight, adpressed. P. 6-8. *Boggy pl.*—*Blue.*
3. M. alpestris. Hairs of st. adpressed; lower L. on long petioles; hairs of cal. spreading, hooked and straight. P. 7-8. *Sco. Alps.*!—*Blue.*

** *Cal. open in fr.; limb of cor. not broader than length of tube.*

4. M. cæspitosa. Hairs of st. and cal. adpressed, straight; pedicel longer than cal. P. 6-8. *Wat. pl.*—*Blue.*
5. M. collina. Hairs of st. and cal. spreading, those of cal. hooked; pedicel equal to cal. A. 4-5. *Dry bks.*—*Blue.*

*** *Cal. closed in fr., with spreading hooked hairs; limb of cor. flat, broader than length of tube.*

6. M. sylvatica. Fl. large. P. 6-7. *Dry pl.*—*Blue.*

**** *Cal. closed in fr.; limb of cor. concave, not broader than length of tube.*

7. M. arvensis. Pedicel longer than cal. A. 5-9. *Fds. and bks.*—*Blue.*
8. M. versicolor. Pedicel shorter than cal. A. 5-7. *Dry bks.*—*Yell. at first, then blue.*

ORDER 60.—LENTIBULARIACEÆ.

355. PINGUIC'ULA. Butter-wort.

* *Spur as long as cor.*

1. **P. grandiflora.** Middle segm. of lower lip notched; spur notched. P. 5-6. *Ir. Bogs* !—*Violet.*

** *Spur not so long as cor.*

2. **P. vulgaris.** Spur linear, obtuse; middle segm. of lower lip entire, upper lip much smaller than lower lip; fl. violet. P. 5-6. *Bogs.*
3. **P. alpina.** Spur short, conical; caps. conical, pointed; segm. of cor. unequal; pet. glabrous. P. 6. *Sco. alp. bogs* !—*Yell.*
4. **P. lusitanica.** Spur curved, obtuse, caps. globose; segm. of cor. nearly equal; ped. hairy; fl. pale lilac. P. 6-7. *Bogs.*

356. UTRICULA'RIA. Bladder-wort.

* *Upper lip of cor. not longer than lower lip; L. many-cleft.*

1. **U. vulgaris.** Spur conical; fl. large; bladders on the L. P. 6-7. *Stagnant water.*—*Yell.*
2. **U. minor.** Spur very short; fl. small; bladders on the L. P. 6-7. *Bogs.*—*Yell.*

** *Upper lip of cor. thrice as long as lower lip; L. 3-fid.*

3. **U. intermedia.** Bladders on separate stalks from the L. P. 8. *Stagnant water.* !—*Yell.*

ORDER 61.—PRIMULACEÆ.

357. HOTTO'NIA. Water Violet.

1. **H. palustris.** Fl. 3-6 in a whorl. P. 5-6. *Ponds and dit.*—*Pale lilac.*

358. TRIENTA'LIS. Chickweed Winter Green.

1. **T. Europæa.** L. obovate-lanc., 5-6 in a whorl. P. 6-7. *Wds. and hea. in N.*—*Wh.*

359. GLAUX. Sea Milk-wort.

1. **G. maritima.** L. opp., ov., glabrous, entire. P. 6-8. *Sea ⅛ Co.*—*Pk.*

360. ANAGAL'LIS. Pimpernel.

1. **A. arvensis.** L. ov., opp., dotted beneath. A. 6-9. *Corn-fds.*—*Red.*
2. **A. cerulea.** L. ov.-lanc., dotted beneath; st. mostly erect. A. 6-7. *Corn-fds.* !—*Blue.*

3. **A. tenella.** L. small, roundish, opp.; cor. bell-shaped, streaked. P. 7-8. *Bogs.—Pk.*

361. LYSIMA'CHIA. Loosestrife.

* *St. erect; ped. many-fld.*

1. **L. vulgaris.** L. ov. or ov.-lanc., opp., or whorled; fl. in a term. pan., sometimes axillar. P. 7-8. *Wet pl.—Yell.*
2. **L. thyrsiflora.** L. lanc., opp.; fl. crowded, small; rac. lateral, axillar, stalked. P. 7. *Wat. pl.* !—*Yell.*

** *St. erect; ped.* 1-*fl., axillar; L. ov.-lanc.*

3. † **L. ciliata.** Petioles ciliated; fl. drooping; fil. 10, 5 fert. and 5 bar. P. 7. *N. Eng.* !—*Yell.*
4. **L. punctata.** Lowest ped. sometimes 2-3-fld.; fil. united at base; cor.-segm. glandular-ciliate. P. 6-7. *S. Eng.* !—*Yell.*

*** *St. procumbent; ped.* 1-*fld., solitary, axillar.*

5. **L. Nummularia.** L. roundish-ov., opp.; fl. often as large as L; ped. short, cal.-segm. broadly ov. P. 6-7. *Wet pl.—Yell.*
6. **L. nemorum.** L. ov., opp.; fl. smaller than L.; ped. long; cal.-segm. linear-lanc. P. 5-9. *Wds.—Yell.*

362. PRI'MULA. Primrose.

* *L. not mealy beneath; fl. yell.*

1. **P. vulgaris.** Ped. 1-fld.; limb of cor. flat. P. 3-5. *Wds.—Yell.*
2. **P. elatior.** Fl. umbellate, nodding; lobes of cor. almost squared; cal.-teeth lanc. P. 4-5. *Mead.* !—*Yell.* Oxlip.
3. **P. veris.** Fl. umbellate, nodding; limb. of cor. concave; cal.-teeth ov., short. P. 4-5. *Mead.—Orange.* Cowslip.

** *L. mealy-wh. beneath; fl. lilac or purp.*

4. **P. farinosa.** L. green above, mealy beneath; cal. teeth linear; stig. capitate, entire. P. 6-7. *Wet pl., N. Eng. and Sco.—Pale lilac.* Bird's-eye.
5. **P. Scotica.** L. mealy on both sides; cal. teeth short, ov., obtuse; stig. 5-fid. P. 7. *N. Sco.* !—*Purplish blue.*

363. CYC'LAMEN. Sow Bread.

1. **C. hederæfolium.** L. all radical, cordate-angular, toothed; root tuberous. P. 9-10. *Wds.—Wh. or flesh.*

364. SAM'OLUS. Brook Weed.

1. **S. Valerandi.** St. erect; L. obovate or oblong, obtuse. P. 7. *Mar.—Wh.*

365. CENTUN'CULUS. Chaff Weed.

1. C. minimus. L. sess., ov.; fl. sess., minute; pl. 1-2 inches high. A. 6-7. *Damp pl.* !—*Flesh.*

ORDER 62.—PLUMBAGINACEÆ.

366. STA'TICE. Sea Lavender.

* *Fl. in dense spikes, or at least crowded at the ends of branches; no bar. branches.*

1. S. Limonium. L. elliptic-lanc. or lanc., 1-ribbed, with lateral veins; flowering pan. corymbose, broad. P. 7-8. *Salt mar.*—*Blue.*
2. S. Dodartii. L. spathulate, often 3-ribbed below, with no lateral veins, small, mucronate; spikes thick, rather short. P. 7-8. *Rocky and san. sh.* !—*Blue.*

** *Fl. in dense spikes, or at least crowded at the ends of branches; pan. with few or many bar. branches below.*

3. S. Caspia. Pan. very much branched, almost from base of scape, generally prostrate; bar. branches very many; spikes very short, only at the tips of branches; L. small. P. 7-8. *Sea sh., E. Eng.* !—*Blue.*
4. S. occidentalis. Pan. not much branched; bar. branches few; spikes linear; pl. erect. P. 7-9. *Sea cliffs* !—*Blue.*

*** *Fl. spiked, usually solitary, (rarely 2 together,) somewhat distant, never crowded at the end of the spikes.*

5. S. Bahusiensis. Pan. branching from below the middle; branches many, curving upwards; L. elliptic or oblong-lanc. P. 7-8. *Sea sh.* !—*Blue.*

367. ARME'RIA. Thrift.

1. A. maritima. Scape downy (rarely glabrous); cal.-teeth short, acute; L. linear, 1-nerved. P. 4-9. *Sea co. and mtns.*—*Pk.*
2. A. plantaginea. Scape nearly glabrous; cal.-teeth long, setaceous; L. narrow-lanc., 3-5-nerved. P. 7-8. *Ch. Is.* !—*Pale purp.*

ORDER 63.—PLANTAGINACEÆ.

368. PLANTA'GO. Plantain.

* *L. entire, ov., or broader.*

1. P. major. L. ascending on longish channelled petioles; spikes linear. P. 6-7. *Past and ro. si.*

2. **P. media.** L. prostrate, petioles winged, short; spikes cylind. short; anthers (fresh) lilac. **P.** 6-9. *Past. and ro. si.*

** *L. entire, lanc., or narrower.*

3. **P. lanceolata.** L. lanc., 5-ribbed; spike ov., or cylind., short. **P.** 5-9. *Past.—Whitish.*
4. **P. maritima.** L. linear, channelled, fleshy; spike cylind. **P.** 6-9. *Sea co. and mtns.*

*** *Some or all the L. pinnatifid or deeply toothed, prostrate.*

5. **P. coronopus.** L. hairy; spikes cylind. **A.** 6-7. *Dry pl.*

369. LITTOREL'LA. Shore Weed.

1. **L. lacustris.** L. linear, all radical; pl. 1½-3 inches high. **P.** 6. *Edges of lakes.*

ORDER 64.—AMARANTHACEÆ.

370. AMARAN'THUS. Amaranth.

1. † **A. Blitum.** Stam. 3; st. ascending, spreading; fl. in axillar clusters and a term. spike. **A.** 8. *Waste grd. and dung hills!—Gr.*
2. † **A. retroflexus.** Stam. 5; st. erect; spike very compound. **A.** 8-9. *Waste grd.!—Gr.*

ORDER 65.—CHENOPODIACEÆ.

371. SALICOR'NIA. Marsh Samphire.

1. **S. herbacea.** Herbaceous, usually erect, joints thickened upwards. **A.** 8-9. *Salt mud.*
2. **S. radicans.** St. woody below, procumbent, joints not thickened upwards. **P.** 8-9. *Salt mar.*

372. SUE'DA. Sea Blite.

1. **S. maritima.** L. often acute; st. prostrate or spreading, rarely erect; styles 2; fr. reticulate. **P.** 7-8. *Sea co.!—Gr.*
2. **S. fruticosa.** L. obtuse; st. shrubby, usually erect; styles 3; fr. smooth. **P.** 7-8. *Sea co.!—Gr.*

373. SAL'SOLA. Salt Wort.

1. **S. Kali.** St. prostrate; fl. axillar. **A.** 7. *San. sh.—Gr.*

374. CHENOPO'DIUM. Goosefoot.

* *L. all quite entire, not angular.*

1. **C. olidum.** L. ov., mealy, stalked, fœtid; spikes short, crowded. **A.** 8-9. *Near sea.—Gr.*

2. C. polyspermum. L. ov., sess., not mealy; spikes long, branched. A. 5-8. *Waste pl.—Gr.*

** *L. hastate-triangular, entire or very nearly so.*

3. C. Bonus Henricus. Fl. in crowded, branched, term. spikes. P. 5-8. *Waste grd.—Gr.*

*** *L. more or less toothed or lobed, white and mealy beneath; upper L. often entire.*

4. C. album. L. more or less mealy on both sides, ov. or lanc., lower sinuate or toothed, upper entire; pl. usually erect. A. 7-9. *Cult. grd.—Gr.*

5. C. glaucum. L. gr. above, wh. beneath, oblong, all sinuate-toothed; st. procumbent. A. 8-9. *Waste grd.*!—*Gr.*

**** *L. toothed or lobed, scarcely or not at all mealy; perianth (of lateral fl.) deeply* 2-3-*fid; seeds very minute, much smaller than rape seed, vertical.*

6. C. rubrum. St. usually erect; L. cuneate at base, elongate-rhomboid, usually much and acutely toothed. A. 8-9. *Dung hills, etc.—Gr.*

7. C. botryoides. St. prostrate; L. broadly-triangular, scarcely cuneate at base. A. 8-9. *Near sea.* !—*Gr.*

***** *L. as last, sinuately toothed, lobes and apex very obtuse; seeds about size of rape-seed or larger.*

8. C. ficifolium. L. oblong or oblong-lanc. A. 8-9. *Waste grd.*! —*Gr.*

****** *L. not mealy, teeth and apex mostly acute.*

9. C. hybridum. L. cordate-ov., with few large teeth or lobes; spikes leafless. A. 8. *Waste grd.*!—*Gr.*

10. C. murale. L. broadly-ov., much and irregularly toothed; spikes leafless. A. 8. *Waste grd.—Gr.*

11. C. urbicum. L. triangular, toothed, margin of base usually hollowed out in large adult L.; spikes erect, nearly leafless. A. *Waste grd.—Gr.*

375. Be'ta. Beet.

1. B. maritima. Procumbent; L. ov.-cuneate; spikes leafy. P. 6-9. *Sea sh.—Gr.*

376. At'riplex. Orache.

* *L. all entire, obovate or obovate-lanc., obtuse, whitish-grey, mealy; st. somewhat shrubby.*

1. A. portulacoides. Fl. crowded, sess., spiked. P. 8-9. *Salt mar. —Yell.*

2. A. pedunculata. Fl. cuneate, stalked, specially in fr. A. 8-10. *Salt mar.* !—*Gr.*

** *Sep. distinct to base, quite entire; L. cordate-triangular, toothed.* In this and all subsequent species, the form of the sep. must be observed on F. fl., when far advanced toward ripe seed. In a young state they afford no definite character.

3. † **A. hortensis.** L. dull gr. beneath. A. 7-8. *Waste grd.*!—*Gr.*
4. † **A. nitens.** L. shining above, silvery beneath. A. 7-8. *S. Eng.*!—*Gr.*

*** *Sep. united below, more or less toothed; L. more or less mealy, especially beneath, ov.-triangular, sinuate.*

5. **A. arenaria.** St. prostrate, buff-coloured; L. very mealy-scaly. A. 7-9. *San. sh.*
6. **A. Babingtonii.** St. procumbent or ascending, gr., striped; L. more or less mealy, not scaly. A. 7-9. *Sea Co.*

**** *Sep. united below, more or less toothed; L. scarcely mealy.*

7. **A. hastata.** Lower L. hastate-triangular, teeth spreading. A. 7-10. *Waste grd.—Gr.*
8. **A. patula.** L. ov., ov.-lanc., or lanc., teeth pointing forwards. A. 7-10. *Waste grd.—Gr.*
9. **A. littoralis.** L. linear, entire (rarely lanc., toothed). A. 7-9. *Sea Co.—Gr.*

Order 66.—POLYGONACEÆ.

377. **Ru'mex.** Dock.

In this genus the form of the pet. must always be observed when the fr. is of full size or nearly ripe.

* *Fl. hermaphrodite; no hastate L.; Pet. all with tubercles of nearly equal size.*

1. **R. Hydrolapathum.** Pet. ov., nearly entire; whorls mostly leafless; L. very large, oblong-lanc. P. 7-8. *Riv. si.—Gr.*
2. **R. conglomeratus.** Pet. ov.-lanc., obtuse, nearly entire; whorls mostly leafy, rather distant. P. 7-8. *Wet pl.—Gr.*
3. **R. maritimus.** Pet. triangular, with 2 bristly teeth on each side as long as the pet.; whorls close, leafy; L. linear-lanc. P. 7-8. *Salt mar.—Yellowish-gr.*
4. **R. palustris.** Pet. lanc., with 2-3 bristly teeth on each side shorter than the pet.; whorls rather distant, leafy; L. linear-lanc. P. 7-8. *Mar.—Gr.*

** *Fl. and L. as last; pet. entire, or nearly so, 1 tubercled, the other 2 either without tubercles or only very small ones.*

5. **R. crispus.** Pet. cordate; L. lanc., wavy. P. 6-8. *Fds.—Gr.*

6. **R. sanguineus.** Pet. oblong, obtuse; whorls mostly leafless, somewhat distant; veins of L. often red. P. 7-8. *Wds. and fds.—Gr. or red.*

*** *Fl. and L. as last; only one pet. chiefly tubercled; pet. toothed, especially at base.*

7. **R. pratensis.** Pet. unequal, cordate. P. 6-7. *Mar.!—Gr.*
8. **R. pulcher.** Pet. ov., pectinate-toothed; lower L. cordate-oblong, contracted below middle; st. stragglingly branched; whorls distant, leafy. P. 8. *Waste pl.—Gr.*
9. **R. obtusifolius.** Pet. ov. or oblong; lower L. cordate-oblong, upper lanc.; whorls mostly leafless; st. erect, with ascending branches. P. 7-8. *Waste grd.—Gr.*

**** *Fl. and L. as last; pet. cordate, without tubercles.*

10. † **R. alpinus.** Root-L. roundish-cordate. P. 7-8. *Waste pl.!—Gr.*
11. **R. aquaticus.** Root-L. cordate-oblong, very large. P. 7-8. *Wet pl. in N.—Gr.*

***** *Fl. dicœcious; L. (at least the lower) hastate or sagittate.* Sorrel.

12. **R. acetosa.** Sep. reflexed; L. sagittate. P. 5-6. *Mead.—Red.*
13. **R. acetosella.** Sep. erect; L. hastate. P. 5-7. *Dry pl.—Red.*

378. OXY'RIA. Mountain Sorrel.

1. **O. reniformis.** L. reniform; st. usually leafless. P. 6. *By mtn. rivulets.—Gr.*

379. POLYG'ONUM. Persicaria.

* *Fl. al' axillar, 1-3 together, never racemose or spiked.*

1. **P. maritimum.** Fr. shining, longer than cal.; ochreæ with many dark, strong, forked nerves; L. ov.-lanc., revolute at edge. P. 8-9. *San. sh. in S.!—Reddish*
2. **P. Raii.** Fr. shining, longer than cal.; ochreæ with few simple nerves; st. prostrate; L. ov.-lanc., flat. A. 8-9. *Sea sh.—Reddish.*
3. **P. aviculare.** Fr. dull, dotted, as long as cal.; ochreæ faintly nerved; L. varying from ov. to linear. A. 5-10. *Fds., etc.—Reddish or wh.*

** *Fl. mostly in rac.; st. twining or climbing, sometimes prostrate; L. cordate-sagittate.*

4. **P. Convolvulus.** Fr. dull, dotted; perianth not winged. A. 6-10. *Fds.—Gr.*
5. **P. dumetorum.** Fr. shining; perianth winged. A. 7. *Thickets, S. Eng.!—Greenish-wh.*

*** *Fl. in spikes; spikes single, term.*

6. **P. viviparum.** Spike lax, linear, bearing fl. and bulbs; L. linear-lanc. P. 6 7. *Mtn. past.—Pale red.*
7. **P. Bistorta.** Spike dense, oblong; L. cordate-ov.; st. erect; stam. 8. P. 6. *Mead.—Reddish.*
8. **P. amphibium.** Spike dense, oblong; L. oblong, if floating; lanc., if growing on land; stam. 5. P. 7-8. *Riv. and ponds, or damp grd.—Rose.*

**** *Fl. in linear term. and lateral spikes; st. branched; styles* 2.

9. **P. mite.** Fr. shining, large, lenticular, broadly ov.; ochreæ glandular; stam. 5; st. usually erect. A. 8-9. *Wet pl.—Red.*
10. **P. hydropiper.** Fr. dull, large, lenticular, broadly ov.; ochreæ glandular; stam. 6; st. usually erect; spikes often drooping. A. 8-9. *Wet pl.—Red or gr.*
11. **P. minus.** Fr. shining, lenticular, narrow ov.; L. linear-lanc.; st. procumbent; ochreæ not glandular; styles united ½ way up. A. 9. *Wet pl.!—Red.*
12. **P. laxum.** Fr. shining, roundish ov., concave on both sides; styles distinct to base; perianth glandular. A. 7-10. *Damp pl.!—Red.*

***** *Fl. in dense cylind. spikes; st. usually branched.*

13. **P. lapathifolium.** L. ov.-lanc.; ochreæ not fringed; ped. and perianth glandular. A. 7-8. *Fds. and waste pl.—Wh. or Gr.*
14. **P. Persicaria.** L. lanc., often spotted, ochreæ fringed; ped. and perianth glabrous. A. 7-9. *Damp pl.—Rose.*

****** *Fl. panicled; styles* 3.

15. † **P. Fagopyrum.** L. cordate-sagittate. A. 7-9. *Fds.—Reddish-wh.*

Order 67.—SCLERANTHACEÆ.

380. Scleran'thus. Knawell.

1. **S. annuus.** Cal. teeth acute, wh. at edge. A. 7. *San. pl.—Gr.*
2. **S. perennis.** Cal. teeth obtuse with a broad wh. membranous border. P. 6-8. *San. fds.—Gr.-wh.*

Order 68.—THYMELÆACEÆ.

381. Daph'ne. Spurge Laurel.

1. **D. Laureola.** L. evergreen, ov.-lanc., crowded at top of st.; rac. about 5-fld., axillar. Sh. 3-4. *Wds. and hedg.—Yellowish-gr.*

2. D. mezereum. L. deciduous, lanc.; fl. in threes, appearing before L. Sh. 2-3. *Wds.*!—*Purp.*—Mezereon.

ORDER 69.—SANTALACEÆ.

382. THE'SIUM. Bastard Toad-flax.

1. T. humifusum. L. linear-lanc. P. 7. *Calc. past.*—*Wh.*

ORDER 70.—ARISTOLOCHIACHEÆ.

383. ARISTOLO'CHIA. Birth-wort.

1. † A. clematitis. L. cordate; st. erect, simple. P. 6-7. *Wds. and ruins*!—*Yell.*

384. AS'ARUM. Asarabacca.

1. A. Europæum. L. 2, reniform, stalked. P. 5. *Wds.*—*Greenish purp.*

ORDER 71.—EMPETRACEÆ.

385. EM'PETRUM. Crake-berry.

1. E. nigrum. L. linear-oblong, evergreen, edges revolute; fl. minute, sess., axillar. Sh. 5. *Hea.*—*Red.*

ORDER 72.—EUPHORBIACEÆ.

386. BUX'US. Box.

1. B. sempervirens. L. ov.-oblong; fl. clustered, axillar. Sh. 4. *Hills.*—*Gr.*

387. EUPHOR'BIA. Spurge.

* *L. with stipules.*

1. E. Peplis. St. forked, prostrate; fl. in the forks. A. 7-8. *San. sh.*!—*Yell.*

** *Stip.* 0; *umb.* 3-5 *rayed*; *L. entire*; *seeds rough or pitted.*

2. E. Peplus. L. obovate; umb. 2-3 rayed. A. 7-9. *Cult. grd.*—*Yellowish-gr.*
3. E. exigua. L. linear, scattered; umb. 3-4 rayed; st. 3-6 inches high. A. 7-8. *Corn-fds.*—*Yellowish-gr.*
4. E. Lathyris. L. narrow-oblong, sess., cordate at base; (opp. and in 4 rows on bar. shoots) umb. 3-4 rayed; st. 2-3 ft. high. B. 5-7. *Thickets*!

5. **E. portlandica.** L. obovate-lanc., scattered, crowded on the bar. shoots; bracts triangular-cordate; umb. 5-rayed. **P.** 7-9. *Sea Co.*!—*Yell. Gr.*

*** *Stip.* 0; *umb. usually* 5-6-*rayed*; *L. entire; seeds smooth, not pitted.*

6. **E. Paralias.** St. many; L. oblong or oblong-lanc., glabrous, tiled, very numerous; bracts ov.-cordate. **P.** 8-9. *San. sh.*—*Yellowish.*

7. **E. amygdaloides.** L. oblong-lanc., hairy, spreading, crowded about middle of st.; bracts perfoliate. **P.** 3-5. *Wds.*—*Yell.*

8. **E. hiberna.** L. ov. or oblong, obtuse, hairy beneath; glands of inv. 4, reniform, purp. **P.** 6. *S. Eng. and Irel.*!—*Yellowish.*

**** *Stip.* 0; *umb.* 3-5-*rayed; L. serrate; carp. glabrous or warty, not hairy.*

9. **E. helioscopia.** Umb. about 5-rayed; L. obovate, obtuse, serrate at end; carp. glabrous; seeds netted. **A.** 6-10. *Cult. grd.*—*Yellowish.*

10. **E. platyphylla.** Umb. 3-5-rayed; L. acute, serrate; carp. tubercled; stam. 7-8 in each inv.; st. slightly branched. **A.** 7-8. *Corn fds.*—*Yellowish.*

11. **E. stricta.** Umb., L., and carp. as last; stam. 2 in each inv.; st. much branched. **P.** 7-8. *W. Eng.* !—*Yellowish.*

***** *Stip.* 0; *umb. usually* 3-5-*rayed; L. serrate; carp. hairy.*

12. † **E. coralloides.** Carp. not warted, woolly; L. lanc., woolly; bracts hairy. **B.** 5-6. *S. Eng.* !—*Yell.*

13. **E. palustris.** Carp. warted, hairy; L. lanc., somewhat hairy; bracts glabrous. **P.** 5-6. *S. Eng.* !—*Yell.*

****** *Stip.* 0; *umb. with many rays.*

14. **E. Esula.** L. lanc., glabrous, serrate. **P.** 7. *Wds.*!—*Yell.*

15. **E. Cyparissias.** L. linear, entire, crowded. **P.** 6-7. *Wds.*!—*Yell.*

388. MERCURIA'LIS. Mercury.

1. **M. perennis.** St. simple; L. ov., roughish. **P.** 4-5. *Wds.*—*Gr.*

2. **M. annua.** St. branched; L. ov., glabrous. **P.** 7-9. *Cult. gr.*—*Gr.*

ORDER 73.—CALLITRICHACEÆ.

389. CALLIT'RICHE. Water Star-wort.

* *Bracts* 2, *falcate.*

1. **C. verna.** Styles erect in fr.; floating L. obovate or spathulate; submersed L. linear. **A.** 7-9. *Dit.*

2. C. platycarpa. Styles reflexed in fr.; L. all ov. or spathulate. A. 5-9. *Mud or dit.*

** *Bracts* 0.

3. C. pedunculata. L. all linear, or if floating, ov.-spathulate; styles reflexed in fr. A. 6-9. *Mar. and lakes.*
4. C. autumnalis. L. all linear, broadest at base, abrupt at end; lobes of (large) fr. broadly winged on back; styles spreading. A. 6-10. *Dit. and lakes.* !

ORDER 74.—CERATOPHYLLACEÆ.

390. CERATOPHYL'LUM. Horn Weed.

1. C. demersum. Fr. with 2 spines or tubercles near base; styles rather long. P. 6-7. *Dit.*
2. C. submersum. Fr. with no spines or tubercles; style very short. P. 6-7. *Dit.* !

ORDER 75.—URTICACEÆ.

391. HU'MULUS. Hop.

1. H. Lupulus. L. broad, 3-5-lobed, rough. P. 7. *Hedg.—Greenish-yell.*

392. URTI'CA. Nettle.

* *F. fl. and fr. in globose, axillar, stalked heads.*

1. † U. pilulifera. L. ov., deeply serrate. P. 6-7. *Near sea* ! *—Gr.*
2. † U. Dodartii. L. ov., nearly entire. P. 6-7. *Waste gr.* ! *—Gr.*

** *Fl. in axillar spikes.*

3. U. urens. Monœcious; L. ov., deeply serrate; spikes simple. A. 6-10. *Waste grd.—Gr.*
4. U. dioica. Dœcious; L. cordate, serrate; spikes branched. P. 7-9. *Waste grd.—Gr.*

393. PARIETA'RIA. Pellitory of the Wall.

1. P. officinalis. L. ov., or ov.-lanc., stalked; fl. 3-7 together, surrounded by an inv. P. 6-7. *Walls.—Gr.*

ORDER 76.—ULMACEÆ.

394. UL'MUS. Elm.

1. U. montana. Wing of fr. slightly notched at top; seed about middle of wing. T. 3-5. *Hedg., etc.*

2. **U. suberosa.** Wing of fr. deeply notched at top, notch reaching nearly to seed. T. 3-4. *Hedg.*

ORDER 77.—ELÆAGNACEÆ.

395. HIPPO'PHAE. Sallow Thorn.

1. **H. rhamnoides.** St. branched, thorny; L. linear-oblong. Sh. 5. *Sea Co.!—Gr.*

ORDER 78.—AMENTIFERÆ.

396. AL'NUS. Alder.

1. **A. glutinosa.** L. roundish, serrate, glutinous. T. or Sh. 2-3. *Wet pl.—Brown.*

397. BET'ULA. Birch.

1. **B. alba.** L. rhomboid-ov., serrate; outer bark wh. T. 4-5. *Wds. and hedg.*
2. **B. nana.** L. small, orbicular, crenate. Sh. 5. *Mtn. bogs.*

398. CARPI'NUS. Hornbeam.

1. **C. Betulus.** L. ov., plaited when young, doubly serrate. P. 5. *Wds. and hedg.*

399. QUER'CUS. Oak.

1. **Q. Robur.** L. oblong, sinuately-lobed. T. 4-5. *Wds. and past.*

400. FA'GUS. Beech.

1. **F. sylvatica.** L. ov., nearly entire, glabrous, silken when young. T. 4-5. *Wds.*

401. CASTA'NEA. Sweet Chesnut.

1. † **C. vulgaris.** L. oblong-lanc., glabrous, acuminate-serrate. T. 5. *Wds.*

402. COR'YLUS. Hazel.

1. **C. avellana.** L. roundish-cordate, cuspidate, stipuled. Sh. 2-4. *Wds.*

403. POP'ULUS. Poplar.

* *L. glabrous on both sides.*

1. **P. nigra.** L. triangular, serrate. T. 3. *Damp pl.*—Black Poplar.
2. **P. tremula.** L. roundish, irregularly toothed. T. 3-4. *Wds.*—Aspen.

** *Younger L. wh. and cottony beneath.*

3. P. alba. L. roundish-cordate, lobed, toothed; stig. 2, bifid, yell. T. 3. *Wds.*
4. P. canescens. L. roundish, toothed; stig. 2-4-fid, purp. T. 3. *Damp. pl.*

404. SALIX. Willow.

In this genus the same remarks apply as in Rubus, Rosa, and Hieracium.

The description of the L. is always that of young, but full grown.

SECT. I. Catkins lateral, on a leafy stalk, appearing at the same time as the L.

* *Stam.* 5.

1. S. pentandra. L. ov.-lanc., glabrous, shining, glandular-serrate. T. 4-5. *Riv. si.*

** *Stam.* 3.

2. S. triandra. L. ov.-lanc., or lanc., serrate; stip. ½-cordate-reniform, blunt; sc. of catkin persistent. Sh. or T. 5. *Wet pl.*
3. † S. undulata. L. lanc., acuminate, serrate, wavy; style long; stip. ½-cordate, acute; sc. of catkin persistent. Sh. or T. 4-5. —*Riv. si.*
4. † S. cuspidata. L. ov.-lanc., glandular-serrate; stip. ½cordate; sc. of catkin deciduous. T. 5-6. *Mead.*!

*** *Stam.* 2.

5. S. fragilis. L. lanc., glabrous beneath; petioles glandular; stip. ½-cordate; caps. stalked; branches usually brittle at the axil. T. 4-5. *Damp grd.*
6. S. alba. L. ov.-lanc., glandular-serrate, silky on both sides when young; caps. nearly sess. T. 4-5. *Damp grd.*—See also Sect. III.

SECT. II. Catkins sess., or nearly so, lateral, appearing mostly before the L.

* *L. glabrous; stam.* 1, *or* 1 *forked fil., supporting* 2 *anthers.*

7. S. purpurea. L. lanc., somewhat broader upwards, minutely serrate; fil. simple, young anth. purp. or red; stip. 0. Sh. 3. *Wet pl.*!
8. S. rubra. L. linear-lanc., serrate; fil. 1, forked; anth. 2, yell.; stip. minute. Sh. 4. *Osier beds.*

** *L. glabrous; stam.* 2; *branches purp., with a glaucous bloom.*

9. **S. acutifolia.** L. linear-lanc., serrate; stip. lanc. T. or Sh. 4. *Yorkshire.*

*** *L. wh. and silky beneath; stam.* 2; *caps. sess., or nearly so.*

10. **S. viminalis.** L. linear; stip. minute, lanc.,; caps. subulate-lanc. Sh. 4. *Osier grds.*

11. **S. stipularis.** L. lanc.; stip. (in summer) large, ½-cordate; caps. ov. Sh. 3. *Osier grds.*

**** *Stam.* 2; *caps. stalked; small shrubs with a more or less subterraneous creeping st., and decumbent branches; ped.* 2-4-*times as long as gland.*

12. **S. fusca.** L. varying from ov.-lanc. to linear-lanc., often glabrous above, silky beneath. Sh. 3-4. *Hea.*

13. **S. ambigua.** L. obovate or lanc., wrinkled and downy above, usually silky beneath; catkins appearing with the L. Sh. 4. *Hea.*

***** *Stam* 2; *caps. stalked. Bushes with erect st. L. white and silky beneath.*

14. **S. Smithiana.** L. lanc.; stig. linear, slender. Sh. 4-5. *Hedg. etc.*

15. **S. acuminata.** L. lanc.; stig. oblong, thick. Sh. 4. *Wds. and hedg.*

****** *Stam.* 2; *caps. stalked. Erect bushes or low trees with downy or woolly L.; L. obovate-lanc., obovate, or broader; style* 0, *or very short.*

16. **S. aurita.** L. obovate or obovate-lanc., wrinkled above; stip. large, roundish, stalked. Sh. 4-5. *Wds.*

17. **S. capræa.** L. roundish-obovate, wavy at edge, downy above, woolly beneath; catkins oval; stip. reniform. Sh. or T. 4-5. *Wds. and hedg.*

18. **S. cinerea.** L. obovate or obovate-lanc., even above; catkins lax in fr., cylind.; stip. roundish or ½-cordate. Sh. or T. 3-4. *Wet pl.*

SECT. III. Catkins sess. or nearly so, lateral, mostly appearing after the L.

* *Adult L. mostly glabrous, sometimes downy or hairy beneath; stip. usually with a cluster of globular glands at base inside; style long.*

19. **S. nigricans.** L. turning black in drying, varying from roundish-obovate to lanc.; young L. and shoots very downy; adult L. glabrous, hairy or silky. Sh. 4-6. *Mtns. and fens.*

20. **S. laurina.** L. not turning black in drying, obovate or oblong, more rigid than last; adult L. glabrous or nearly so. Sh. 4-5. *Wds. and thickets.*
21. **S. phylicifolia.** L. not turning black in drying, varying from roundish-obovate to lanc. Adult L. dark-green, quite glabrous, rigid, shining above. Sh. 4-6. *Mtns. and bogs.*

** *Catkins on short, bracteated, scarcely leafy stalks; stip. not glandular at base. Short, erect shrubs with narrow L., satiny beneath.*

22. **S. angustifolia** L. linear-lanc.; stig. lanc., entire. Sh. 4. *Sco.* !
23. **S. Doniana.** L. linear-lanc.; stig. short, notched. Sh. 5. *Sco.* !

*** *Catkins quite sess.; L. wh.-cottony-woolly on both sides; caps. sess.*

24. **S. Lapponum.** A low, much-branched shrub. Sh. 6-7. *Sco. mtns.* !

**** *Catkins on short leafy shoots; L. ov., or ov.-lanc., glabrous above, and generally beneath.*

25. **S. arbuscula.** A small decumbent shrub. Sh. 4-6. *Sco. mtns.*!

SECT. IV. Catkins term., or term. and lateral, appearing with the adult L.

* *St. erect.*

26. **S. lanata.** Catkins term. and lateral, large, golden-silky; L. ov., acute, densely silky. Sh. 5. *Sco. mtns.* !
27. **S. myrsinites.** L. ov. or lanc., glabrous or nearly so. Sh. 6. *Sco. mtns.* !

** *St. procumbent.*

28. **S. procumbens.** L. oval, serrate, glabrous and shining; catkins long; sc. nearly black, hairy. Sh. 6. *Sco. mtns.* !
29. **S. herbacea.** L. orbicular or oval, serrate, glabrous; catkins few-fld.; sc. brown, glabrous; st. creeping and rooting; branches 1-2 inches high. Sh. 6. *Mtns.*
30. **S. reticulata.** L. orbicular-oval, entire, netted beneath, margin recurved. Sh. 6. *Mtns.*

405. MYRI'CA. Sweet Gale. Bog Myrtle.

1. **M. Gale.** St. erect; L. lanc., serrate. Sh. 5. *Bogs.*

ORDER 75.—CONIFERÆ.

406. PI'NUS. Fir.

1. **P. sylvestris.** L. 2 in a sheath; cones pendulous, usually in pairs; point of sc. deflexed. T. 5. *Sco. mtns. and S. Eng.*

2. † **P. Pinaster.** L. 2 in a sheath; cones spreading, clustered; point of sc. not deflexed. T. 4. *S. Eng.*

407. JUNIP'ERUS. Juniper.

1. **J. communis.** L. 3 in a whorl, linear, stiff, longer than fr.; st. erect, branched; berries globose. Sh. 5. *Hea.*
2. **J. nana.** L. as last, but not longer than fr.; st. prostrate; berries oval. Sh. 5. *Mtns.*

408. TAX'US. Yew.

1. **T. baccata.** L. linear, acute; fl. axillar. T. 3-4. *Wds., etc.*

ORDER 80.—TAMACEÆ.

409. TA'MUS. Black Bryony.

1. **T. communis.** L. cordate-acuminate, shining; fl. in axillar rac. P. 6-7. *Hedg.—Greenish.*

ORDER 81.—TRILLIACEÆ.

410. PAR'IS. Herb Paris.

1. **P. quadrifolia.** L. ov.; fl. single, term. P. 5-6. *Wds.—Gr.*

ORDER 82.—ORCHIDACEÆ.

411. EPIPO'GIUM. Epipogium.

1. **E. Gmelini.** St. with sheathing sc.; fl. few, drooping, racemose. P. 7-8. *Wds.*!—*Straw.*

412. HABENA'RIA.

* *Spur very long; lower lip of fl. entire.* Butterfly Orchis.

1. **H. bifolia.** Anther cells parallel; spur very slender, equal throughout; root-L. usually 2, ov. or oblong. P. 6. *Hea.*! —*Wh.*
2. **H. chlorantha.** Anther cells diverging; spur thickened towards tip; root-L. usually 2, ov. or oblong. P. 6. *Wds.* —*Wh.*

** *Spur very short, like a pouch; lower lip* 3*-toothed.*

3. **H. viridis.** Spur slightly notched; L.-ov., upper lanc. P. 6. *Past.*—*Gr.* Frog Orchis.

413. GYMNADE'NIA. Scented Orchis.

1. G. conopsea. Spur linear-setaceous, twice as long as ovary; L. narrow-lanc.; spike oblong, somewhat dense; fl. fragrant. P. 6-7. *Hi ls.—Rose.*
2. G. albida. Spur not more than ½ length of ovary; L. oblong; spike cylind., dense. P. 6. *Hills.—Wh.*

414. OR'CHIS. Orchis.

* *Spur quite as long as, or longer than, ovary.*

1. O. pyramidalis. Spike dense, truly conical, broad at base; bracts 3-nerved; spur slender, pointed. P. 7. *Calc. soil.—Deep rose, rarely wh.*
2. O. mascula. Spike lax; bracts 1-nerved; spur thick, blunt; L. elliptic or lanc., usually spotted. P. 4-5. *Wds.—Rose-purp.*

** *Spur ½ to ¾ length of ovary; lateral lobes of lower lip of cor. linear.*

3. O. militaris. Middle lobe of lower lip with 2 oblong segm. and a tooth between. P. 5. *Chalky past.!—Purp.*
4. O. fusca. Middle lobe of lower lip broad, notched, with a tooth in the notch. P. 5. *Chalky past.!—Purp.*
5. O. Simia. Middle lobe of lower lip with 2 linear lobes, and a setaceous tooth between. P. 5. *Chalky hills!—Purp.*

*** *Spur ½ to ¾ length of ovary, blunt, cylind., lateral lobes of lower lip broad; sep. scored with green lines.*

6. O. Morio. Bracts 1-nerved; spur nearly as long as ovary. P. 4-5. *Mead.—Purp.*
7. O. laxiflora. Bracts 3-5-nerved; spur much shorter than ovary. P. 5-6. *Wet mead., Ch. Is.!—Purp.*

**** *Spur ½ to ¾ length of ovary, subulate; lateral lobes of lower lip not linear; sep. not scored with green lines.*

8. O. maculata. Lower lip flat, generally deeply 3-lobed; st. solid. P. 5-6. *Wds. and past.—Pale purp. or wh.*
9. O. latifolia. Lower lip slightly 3-lobed, lateral lobes reflexed; st. hollow; lower bracts longer than fl. P. 6. *Mar.—Purp.-rose.*
10. O. incarnata. Lower lip slightly 3-lobed, lateral lobes reflexed; st. hollow; most of the bracts longer than fl.; L. lanc., hooded at end. P. 6. *Mtn. pl.—Purp.-rose.*

***** *Spur less than ½ length of ovary.*

11. O. ustulata. Lower lip 4-lobed, upper part of fl. very dark purp.; lip white, spotted; fl. in a dense spike. P. 6. *Dry past.—Purp.*
12. O. hircina. Lower lip downy, 3-fid, segm. linear, middle lobe twisted, spur very short. P. 7. *Chalky past.!—Purp., gr. or wh.*

13. **O. intacta.** Lower lip 3-fid, middle lobe largest, truncate, spur very short; pet. linear; sep. ½-lancet-shaped. **P.** 6. *Irel.* !—*Pk.*

415. CYPRIPE'DIUM. Lady's Slipper.

1. **C. Calceolus.** L. ov.; st. 12-18 inches high. **P.** 5-6. *Wds. in N.* !—*Yell. and purp.*

416. MALAX'IS. Bog Orchis.

1. **M. paludosa.** St. 5-angled, 1-4 inches high; **L.** 3-5, spathulate. **P.** 7. *Bogs.* !—*Greenish.*

417. STUR'MIA.

1. **S. Loeselii.** St. 3-angled; L. 2, ov-lanc.; st. 2-6 inches high; fl. few, in a spike. **P.** 7. *Bogs* !—*Yellowish.*

418. SPIRAN'THES. Lady's Tresses.

1. **S. autumnalis.** Spike 1-rowed; root-L. ov., or oblong, spreading; lower lip obcordate. **P.** 8-9. *Past.*—*Wh.*
2. **S. æstivalis.** Spike 1-rowed; root-L. lanc., erect,; lower lip ov. **P.** 7-8. *Bogs* !—*Wh.*
3. **S. cernua.** Spike 3-rowed, dense; root-L. lanc., erect; lower lip oblong. **P.** 7-8. *Irel.* !—*Wh.*

419. GOODYE'RA.

1. **G. repens.** Lower L. ov., stalked, netted with brown veins. **P.** 7-8. *Sco. wds.* !—*Greenish.*

420. CORALLORH'ZA. Coral Root.

1. **C. innata.** Root thick, fleshy, branched; spike few-fld. **P.** 5-6. *Sco. wds.* !—*Yell.*

421. NEOT'TIA. Bird's-nest Orchis.

1. **N. Nidus avis.** Root of many clustered cylind. branches; Spike ov., or cylind., dense. **P.** 5-6. *Wds.*—*Brownish-yell.*

422. A'CERAS. Man Orchis.

1. **A. Anthropophora.** Spike long, lax.; L. lanc.; lower lip longer than ovary. **P.** 6. *Chalky past.* !—*Greenish.*

423. CEPHALANTHE'RA.

* *Ovary glabrous; fl. wh.*

1. **C. grandiflora.** Bracts longer than ovary; L. ov., or ov.-lanc. **P.** 6. *Wds.*—*Wh.*
2. **C. ensifolia.** Bracts much shorter than ovary; L. lanc. **P.** 5-6. *Mtn. wds.* !—*Wh.*

** *Ovary downy; fl. purp. or rose.*

3. C. rubra. L. lanc. P. 5-6. *Wds.*!—*Purp.-rose.*

424. EPIPAC'TIS. Helleborine.

1. E. latifolia. Lower L. roundish-ov., very clasping, passing upwards into lanc. L.; sep. and pet. broadly ov., term. division of lower lip roundish. P. 7-8. *Wds.—Purplish*
2. E. media. Lower L. ov.-oblong, upper lanc.; sep. and pet. lanc., term. division of lower lip longer than broad. P. 8. *Wds.*!—*Greenish-purp.*
3. E. ovalis. Lower L. ov., spreading, smaller than in the last 2 species, upper lanc.; term. division of lower lip broader than long; sep. and pet. ov., acute. P. 7. *Wds.*!—*Dark yell. or dark red.*
4. E. palustris. All the L. lanc.; fl. large, drooping; bracts shorter than fl. P. 7-8. *Bogs.—Whitish.*

425. LIS'TERA. Twayblade.

1. L. ovata. L. ov., opp.; lower lip 2-lobed. P. 6. *Wds.—Gr.*
2. L. cordata. L. cordate, opp.; lower lip 4-lobed. P. 6-8. *Wds. and moors.—Gr.*

426. HERMIN'IUM. Musk Orchis.

1. H. monorchis. L. oblong or lanc.; st. 3-6 inches high; tubers globular. P. 6-7. *Calc. soil, S. Eng.*!—*Greenish.*

427. OPH'RYS.

1. O. apifera. Lower lip dilated, as broad as long, velvety brown, 3-lobed, middle lobe notched, with a central, subulate, reflexed appendage; sep. ov., spreading, pink. P. 5-7. *Chalky past.—Pk. and dark brown.*—Bee Orchis.
2. O. arachnites. Lower lip dilated, velvety, as broad as long, with a term., somewhat cordate appendage, straight or bent upwards; sep. triangular, pinkish. P. 5-6. *Calc. past.*!—*Pk. and dark brown.*
3. O. aranifera. Lower lip dilated, brown, as broad as long, entire or slightly 3-4-lobed; sep. green; pet. linear. P. 6. *Chalky past.*!—*Gr. and brown.*—Spider Orchis.
4. O. muscifera. Lower lip oblong, with 2 lateral lobes, and a longer 2-fid middle one; sep. oblong; pet. narrow-linear. P. 5-7. *Calc. past.—Dark brown purp.*—Fly Orchis.

ORDER 83.—IRIDACEÆ.

428. I'RIS. Flag. Fleur de Lis.

1. I. pseudacorus. Fl. yell.; L. sword-shaped; st. terete, many-fid.; inner pet. smaller than stig. P. 6-7. *Wat. pl.*

2. **I. fœtidissima.** Fl. dull purp.; L. sword-shaped; st. compressed, 1-angled, many-fld.; inner pet. equal to stig. P. 6-7. *Thickets and bks.*
3. † **I. tuberosa.** Fl. dark-purp.; L. 4-angled; st. 1-fld.; pet. acute; root tuberous. P. 2-5. *Mead. etc.*!

429. CRO'CUS. Crocus.

* *Fl. in spring with the L.; scapes enclosed in a tubular sheath.*

1. † **C. vernus.** Throat fringed. P. 3. *Mead.*!—*Violet-purp.*

** *Fl. in spring with the L.; scapes naked.*

2. † **C. biflorus.** Stam. shorter than pist.; stig. deeply 3-fid. P. 3. *Past.*!—*Lilac, striped.*
3. † **C. aureus.** Stam. longer than pist.; stig. shortly 3-fid. P. 3. *Past.*!—*Yell.*

*** *Fl. in autumn without L.*

4. **C. nudiflorus.** Stig. included, as long as stam. P. 9. *Mead.*!—*Violet-purp.*
5. † **C. sativus.** Stig. projecting from cor.; throat bearded. P. 9. *Mead.*!—*Purp.*

430. SISYRIN'CHIUM. Blue-eyed Grass.

1. **S. anceps.** St. winged; L. grass-like. P. 7. *Ir. wds.*!—*Blue.*

431. TRICHONE'MA. Ixia.

1. **T. Columnæ.** St. 1-fld.; L. filiform, recurved. P. 3-4. *San. pl., S. Eng. and Ch. Is.*!—*Purp.*

432. GLADI'OLUS. Cornflag.

1 **G. communis.** L. linear-lanc.; st. 1½-2ft. high. P. 5-6. *S. Eng.*!—*Red.*

ORDER 84.—AMARYLLIDACEÆ;

433. NARCIS'SUS. Daffodil, etc.

* *Crown very short; pet. white.*

1. † **N. poeticus.** Crown edged with crims.; st. 1-fld. P. 5-6. *Fds.*!—*Wh.*
2. † **N. biflorus.** Crown yell.; st. 2-fld. P. 4-5. *Fds.*!—*Wh.*

** *Crown waved at edge; pet. yell.; scape 1-fld.*

2. **N. Pseudo-Narcissus.** Crown as long as pet. P. 3-4. *Fds. and wds.*
4. † **N. incomparabilis.** Crown ½ as long as pet. P. 4. *Fds.*!

*** *Crown decidedly* 6-*lobed*; *scape* 1-*fid.*

5. † **N. minor.** Fl. on long ped.; crown as long as pet. **P.** 3-4. *Wales!*
6. † **N. lobularis.** Crown ½ as long as pet. **P.** 3-5. *Wales!*

434. GALAN'THUS. Snowdrop.

1. **G. nivalis.** Scape 1-fld., fl. drooping. **P.** 2-3. *'Wds. and mead.—Wh.*

435. LEUCO'JUM. Summer Snow Flake.

1. **L. æstivum.** Spathe 2-6-fld. **P.** 5. *Damp. mead.!—Wh.*

ORDER 85.—LILIACEÆ.

436. RUS'CUS. Butcher's Broom.

1. **R. aculeatus.** St. erect, branched. **Sh.** 3-4. *Wds. and hedg. —Wh.*

437. GA'GEA. Yellow Star of Bethlehem.

1. **G. lutea.** L. linear; pet. 6, spreading. **P.** 3-5. *Wds. and past.!—Greenish-yell.*

438. CONVALLA'RIA. Lily of the Valley.

1. **C. majalis.** L. 2, ov. or ov.-lanc. **P.** 5. *Wds.—Wh.*

439. MUSCA'RI. Starch Hyacinth.

1. **M. racemosum.** L. linear, all radical; fl. drooping. **P.** 5. *San. fds.!—Dark blue*

440. ENDYM'ION. Wild Hyacinth.

1. **E. nutans.** L. linear; bracts in pairs. **P.** 5. *Wds.—Blue.*

441. SCIL'LA. Squill.

1. **S. verna.** Bracts lanc.; fl. in a corymb; L. linear, channelled. **P.** 3-5. *Sea Co.—Blue.*
2. **S. autumnalis.** Bracts 0; fl. in a rac.; L. linear. **P.** 8. *Dry past.—Blue.*

442. ORNITHOG'ALUM. Star of Bethlehem.

1. † **O. umbellatum.** Fl. in a corymb; L. narrow-linear. **P.** 5. *Mead.!—Wh.*
2. **O. pyrenaicum.** Fl. in a long rac.; ped. spreading or erect; fl. many, small; fil. simple. **P.** 6. *Wds.!—Greenish-wh.*
3. † **O. nutans.** Fl. large, few, drooping, in a rac.; fil. 3-fid. **P.** 4-5. *Fds.!—Greenish-wh.*

443. ASPAR'AGUS.

1. **A. officinalis.** Fl. drooping, axillar. P. 8. *Sea Co.—Greenish.*

444. TU'LIPA. Tulip.

1. † **T. sylvestris.** L. lanc.; fil. hairy. P. 4. *Chalky past.*!—*Yell.*

445. LLOY'DIA. Spider-wort.

1. **L. serotina.** St. leafy. P. 6. *Welsh mtns.*!—*Wh.*

446. FRITILLA'RIA. Fritillary.

1. **F. meleagris.** L. alt., linear-lanc.; fl. large. P. 4. *Mead.*!

447. AL'LIUM. Garlic.

* *Umb. globose, not bearing bulbs; L. cylind., fistular.*

1. **A. Schœnoprasum.** Stam. all simple, ½ as long as pet. P. 6. *Past.*!—*Rose-purp.*
2. **A. sphærocephalum.** 3 alt. stam. 3-fid.; stam. twice as long as pet.; L. channelled above. P. 6-7. *Ch. Is.*!—*Rose.*

** *Umb. not bearing bulbs; L. more or less flat, not fistular.*

3. **A. Ampeloprasum.** L. linear, flat, keeled; stam. longer than pet., 3 alt. ones trifid; umb. globose. P. 8. *Rocky Is.*!—*Pale purp.*
4. **A. triquetrum.** L. linear, folded, keeled; pet. erect, strongly 1-nerved. P. 4-6. *Ch. Is.*!—*Wh.*
5. **A. ursinum.** L. ov.-lanc.; pet. spreading. P. 5-6. *Wds., etc.*—*Wh.*

*** *Umb. bearing bulbs; stam. all simple.*

6. **A. oleraceum.** L. semi-cylind., fistular; stam. about as long as pet.; spathe of 2 bracts, one with a long point, much longer than the umb. P. 7. *Corn-fds.—Reddish.*
7. † **A. ambiguum.** L. linear, flat; stam. ½ as long as pet.; spathe of 3-4 bracts. P. 5. *Past.*!—*Rose.*

**** *Umb. bearing bulbs; 3 stam. simple, 3 trifid.*

8. **A. Babingtonii.** L. flat, linear; bulbs few, large; fl. numerous; ped. 1-4-fid.; spathe with a long point. P. 8. *Ire.*!—*Purp.*
9. **A. Scorodoprasum.** L. flat, linear; bulbs many, small; fl. few; ped. all 1-fid.; spathe with a short point. P. 6-7. *San. fds.*!—*Purp.*
10. **A. vineale.** L. terete, hollow; heads with many bulbs and few fl.; spathe of 1 long-pointed L. P. 7. *Dry fds.—Greenish-rose.*

448. Sim'ethis.

1. S. bicolor. St. scaly at base; fl. erect. P. 5. *Dry pl., S. Eng.*! —*Purp. and wh.*

449. Polygona'tum. Solomon's Seal.

1. P. verticillatum. L. narrow-lanc., in whorls; ped. 2-4 fld. P. 6. *Sco. Wds.*!—*Wh.*
2. P. officinale. L. alt., ov., or oblong; st. angular; ped. 1-2-fld., axillar, mostly solitary. P. 5-6. *Rocky wds.*!—*Greenish-wh.*
3. P. multiflorum. L. alt., ov., or oblong; st. terete; ped. axillar, 1-8-fld. P. 5-6. *Wds.—Greenish-wh.*

449.* Lil'ium. Lily.

1. L. Martagon. L. whorled, ov.-lanc.; fl. wine-red. P. 6-7. *Copses*!
2. L. pyrenaicum. L. scattered, linear-lanc.; fl. yell.; pet. linear-lanc. P. 6. *Devon*!

449.** Malan'themum.

1. M. bifolium. Fl. small. P. 6. *Wds.*!

450. Narthe'cium. Bog Asphodel. Lancashire Asphodel.

1. N. ossifragum. Rac. erect; fl. erect. P. 6-7. *Bogs.—Yell.*

Order 86.—MELANTHIACEÆ.

451. Col'chicum. Meadow Saffron.

1. C. autumnale. L. flat, lanc.; fl. appearing after the L. have disappeared. P. 8-10. *Mead.—Purp.*

452. Tofiel'dia.

1. T. palustris. L. sword-shaped, all radical. P. 7. *Mtn. bogs.—Greenish-wh.*

Order 87.—HYDROCHARIDACEÆ.

453. Anach'aris. New Water-weed.

1. A. alsinastrum. Fl. small, with very long tube. P. 7-9. *Ponds, dit., etc.—Purplish.*

454. Hydroch'aris. Frogbit.

1. H. morsus Ranæ. Fl. large, wh.; sep. 3; pet. 3. P. 7. *Dit. and ponds.*

455. STRATIO'TES. Water Soldier.

1. S. aloides. L. crowded, erect. P. 7. *Dit.—Wh.*

ORDER 88.—ALISMACEÆ.

456. BU'TOMUS. Flowering Rush.

1. B. umbellatus. L. linear, radical; fl. large. P. 6-7. *Dit.—Rose.*

457. ACTINOCAR'PUS. Star-headed Water Plantain.

1. A. Damasonium. Scape with 1, 2 or 3 whorls of fl; L. cordate-ov. or oblong, floating. P. 6-7. *Pools and dit.!—Wh.*

458. ALIS'MA. Water Plantain.

1. A. Plantago. Erect; L. cordate-ov., ov.-lanc. or lanc., large; pan. much branched; branches in whorls. P. 7-8. *Dit.—Pale lilac.*
2. A. ranunculoides. Erect (rarely creeping); L. lanc. or linear-lanc; fl. in a simple umb. (rarely a 2nd whorl below). P. 8. *Bogs.—Whitish.*
3. A. natans. St. long, floating; L. oblong, on long stalks, several from each node; fl. 2-3 from each node. P. 7-8. *Lakes, etc.!—Wh.*

459. SAGITTA'RIA. Arrow-head.

1. S. sagittifolia. Fl. large. P. 7-8. *Ponds, riv., etc.—Wh.*

460. SCHEUCHZE'RIA. Scheuchzeria.

1. S. palustris. L. nearly terete; fl. about 5 in a term. cluster. P. 6-8. *Bogs.—Gr.*

461. TRIGLO'CHIN. Arrow Grass.

1. T. palustre. Caps. 3-celled, linear. P. 6-7. *Bogs.—Gr.*
2. T. maritimum. Caps. 6-celled, ov. P. 7-8. *Salt mar.—Gr.*

ORDER 89.—NAIADACEÆ.

462. ZOSTE'RA. Grass Wrack.

1. Z. marina. L. 3-7-nerved; achenes furrowed. P. 7-8. *Sea.*
2. Z. nana. L. 1-nerved; achenes smooth; pl. 3-4 inches long. P. 7-8. *Sea.*

463. NAI'AS.

1. N. flexilis. L. pellucid; sheaths ciliate-toothed. A. 8-9. *In. lakes!*

464. ZANNICHEL'LIA. Horned Pond Weed.

1. Z. palustris. Fl. axillar. A. 7. *Ponds and dit.*

465. RUP'PIA. Tassel Grass.

1. R. maritima. P. 7-8. *Salt water dit.*

466. POTAMOGE'TON. Pond Weed.

In this genus the achenes should be observed after they have been allowed to dry.

* *L. with free stip; upper L. floating; L. all stalked; (in 1 species which often grows in mud, the upper L. then sometimes stand out of water.)*

1. P. natans. Floating L. rather thick and tough, ov.-oblong (rarely narrow-ov.); achenes large, keeled at back. P. 7-8. *Ponds.—Olive.*
2. P. oblongus. L. as last; achenes minute, not keeled. P. 7. *Ponds.—Gr.*
3. P. plantagineus. Upper L. varying from nearly orbicular to oval, beautifully thin, translucent and netted, lower oblong; achenes minute, keeled on back. P. 6-7. *Stagnant water on bogs.—Olive.*

** *L. with free stip.; upper L. commonly floating, stalked; submersed L. sess.; floating L. often absent.*

4. P. heterophyllus. Floating L. oval, lower lanc., minutely toothed; stip. ov.-lanc., 2-ribbed; ped. thickened upwards. P. 6-8. *Ponds.—Gr.*
5. P. rufescens. Floating L. oblong or obovate, petioles shorter than L., lower L. lanc., entire, reddish-gr. P. 7. *Streams. —Gr.*
6. P. lanceolatus. Floating L. ov.-lanc.; lower lanc. entire, with small chain-like cells on either side of mid-rib; stip. linear. P. 7. *Pools, etc.*!—*Gr.*
7. P. sparganiifolius. Floating L. lanc., on long stalks, often absent; submersed L. long, linear, few-veined, without the chain-like cells next mid-rib. P. 7. *Irel.*!—*Gr.*
8. P. nitens. Upper L. nearly opp.; lower alt., lanc., ½-clasping; ped. stout, thickened upwards; spike close, short. P. 7. *Irel.*!—*Gr.*

*** *L. with free stip., all submersed, alt., except at base of fruit stalk, broader than lineer, minutely toothed or serrulate.*

9. P. crispus. L. narrow-oblong, wavy; achenes beaked. P. 6-7. *Dit.—Olive.*
10. P. lucens. L. stalked, ov.-lanc.; stip. large, 2-winged on back. P. 6-7. *Streams.—Gr.*
11. P. perfoliatus. L. cordate, or cordate-ov., clasping. P. 7. *Streams.—Reddish Gr.*

**** *L. and stip. as last, but L. entire.*

12. P. longifolius. L. lanc.; stip. crested or 2-winged on back. P. 8. *Lakes.—Gr.*
13. P. prælongus. L. lanc. or linear-oblong, hooded at apex; stip. not winged. P. 6. *Riv.* !—*Gr.*

***** *L. linear, all submersed, with free stip.; ped. very short, scarcely longer than spike.*

14. P. acutifolius. St. flattened; L. acuminate-cuspidate, with 3 strong nerves and many fainter ones P. 6. *Dit.* !—*Gr.*
15. P. gramineus. St. terete; L. obtuse, 3-nerved. P. 7. *Dit.* ! *etc.—Gr.*

****** *L. as last, stip. free or adnate; ped. much longer than spike.*

16. P. zosteræfolius. L. acuminate, with 3 strong nerves and many fainter ones; stip free. P. 6. *Riv. and lakes* !—*Gr.*
17. P. flabellatus. L. faintly 3-5-nerved; achenes keeled; spikes interrupted; stip. adnate. P. 6-7. *Ponds and dit.—Olive.*
18. P. pusillus. L. narrow-linear, pointed, 3-nerved; spikes oblong or globose; stip. free. P. 7-8. *Dit.—Gr.*
19. P. compressus. L. linear-apiculate, 5-nerved; spikes interrupted; stip. free. P. 7-8. *Ponds and dit.—Gr.*

******* *L. all setaceous.*

20. P. pectinatus. L. in two rows; stip. adnate; achenes not keeled; spikes interrupted. P. 6-7. *Fresh and salt water dit.—Olive.*
21. P. trichoides. Stip. free; achenes strongly keeled; spikes lax. P. 7-8. *Dit.* !—*Gr.*

******** *L. opp.; stip.* 0.

22. P. densus. L. varying from ov. to lanc., crowded, sess.; spike recurved in fr. P. 6-8. *Dit.—Olive.*

Order 90.—ARACEÆ.

467. A'rum. Wake-robin. Lords and Ladies.

1. A. maculatum. L. ov.-sagittate, or slightly hastate, gr. or spotted. P. 4-5. *Fds.—Greenish-wh.*
2. A. italicum. L. veined with wh. or yell., triangular-hastate, lobes diverging. P. 6. *S. Eng.* !

468. A'corus. Sweet Flag.

1. A. Calamus. L. usually crisped along part of the edge. P. 6. *Riv. and ponds* !—*Gr.*

ORDER 91.—TYPHACEÆ.

469. SPARGA'NIUM. Bur Reed.

* *St. erect, not floating.*

1. S. simplex. St. simple, or if any branches, each only bearing 1 head. P. 7-8. *Dit. etc.*
2. S. ramosum. St. branched, branches with several heads. P. 7-8. *Dit.*

** *St. long, floating.*

3. S. natans. Heads of M. fl. several; achenes stalked in the heads. P. 7-8. *N. lakes!*
4. S. minimum. Heads of M. fl. only 1; achenes sess. in the heads. P. 7-8. *Lakes, etc.*

470. TY'PHA. Reed Mace. Bull Rush.

1. T. latifolia. Spike continuous; M. and F. portions adjoining. P. 6-7. *Ponds.*
2. T. angustifolia. Spike interrupted; M. and F. portions separated. P. 6-7. *Ponds.*

ORDER 92.—LEMNACEÆ.

471. LEM'NA. Duckmeat.

* *Roots several from each frond.*

1. L. polyrhiza. Frond orbicular-ov., flat, purp. beneath. A. 6-9. *Stagnant water.*

** *Root* 1 *from each frond.*

2. L. gibba. Frond oval, hemispherical beneath. A. 6-9. *Stagnant water.*
3. L. minor. Frond oval, flat. A. 6-9. *Stagnant water.*
4. L. trisulca. Frond ov.-lanc., thin, serrate at one end, tailed at the other, proliferous, usually many adherent together. A. 6-9. *Stagnant water.*

ORDER 93.—RESTIACEÆ.

472. ERIOCAU'LON. Pipe-wort.

1. E. septangulare. St. 7-angled. P. 8. *Pools in Ir.!*

ORDER 94.—JUNCACEÆ.

473. JUN'CUS. Rush.

* *L. 0., or only a few sheathing sc. at base; st. many, barren; fl. in a nearly term. pan.; seeds with an appendage at each end.*

1. J. acutus. Ripe caps. roundish, twice as long as cal.; end of st. thorny. P. 7-8. *Sea Sh.* !
2. J. maritimus. Ripe caps. oval, as long as cal. P. 7-8. *Salt mar.*

** *L. and st. as last; pan. lateral; seeds without appendages at end.*

3. J. conglomeratus. St. soft; pan. in a close, compact head; caps. obovate, apiculate; stam. 3. P. 7-8. *Wet pl.*
4. J. effusus. St soft; pan. lax; caps. obovate, obtuse; stam. 3 or 6. P. 7-8. *Wet pl.*
5. J. glaucus. St. harder, stiff, striated; pan. not far from top of st. P. 7-8. *Wet pl.*
6. J. Balticus. St. very stiff and sharp; pan. few-fld., branched, usually above middle of st. P. 7. *Nan. N. Co.* !
7. J. filiformis. St. filiform; pan. simple, few-fld., usually below middle of st. P. 7. *Margin of lakes.*

*** *St. leafless; L. all radical; fl. in term. heads or (rarely) only* 1 *term. fl. on a st.*

8. J. capitatus. Head generally solitary (rarely 1 or 2 lower ones); stam. 3; sep. ov.-lanc., long-pointed. A. 6-7. *Ch. Is.* !
9. J. triglumis. Fl. 1-6; bract as long as fl.; caps. oval, pointed. P. 7. *Bogs on mtns* !
10. J. biglumis. Fl. 2; bract longer than fl.; caps. pear-shaped, obtuse; st. with a groove on one side. P. 8. *Bogs on Sco. mtns.* !

**** *St. leafless; L. all radical; fl. in a small close pan.*

11. J. squarrosus. L. setaceous, rigid. P. 6-7. *Wet hea.*

***** *St. leafy; fl. usually in a single (rarely 2 or 3) term. heads.*

12. J. castaneus. Heads 1, 2, or 3; st.-L. 2 or 3. P. 7. *Mtn. bogs.* !
13. J. trifidus. Heads of 1-3 fl., with 2 or 3 setaceous bracts, 1 or 2 of which are very long. P. 7. *Sco. mtns.* !

****** *St. leafy; fl. in lateral and term. heads, scarcely panicled.*

14. J. supinus. Heads about 3-fld., often proliferous; st. usually bulbous at base. P. 6-8. *Bogs.*

******* *St. leafy; fl. in numerous heads arranged in a term. branched panicle.*

15. J. obtusiflorus. Sep. equal, obtuse; many branches of pan. reflexed in fr. P. 7-9. *Mar. pl.*
16. J. acutiflorus. Sep. all acuminate, 3 inner longest. P. 7-8. *Mar. pl.*
17. J. lamprocarpus. Sep. all equal, 3 outer acute, 3 inner obtuse. P. 7-8. *Mar. pl.*

******** *St. leafy; Fl. single, not in heads, panicled or spiked.*

18. J. compressus. St. compressed above; bracts longer than pan. P. 7-8. *Moist pl.*
19. J. cœnosus. St. bluntly 3-angled above; bracts shorter than pan. P. 7-8. *Salt mar.*
20. J. bufonius. Pan. forked; fl. distinct, somewhat spiked; L. setaceous; caps. shorter than cal. A. 7-9. *Wet pl.*

474. Lu'zula. Wood Rush.

* *Fl. all or mostly solitary, stalked, panicled.*

1. L. pilosa. Many of the pedicels reflexed in fruit; ripe caps. obtuse, longer than sep. P. 4-5. *Wds.—Chocolate.*
2. L. Borreri. Many of the pedicels reflexed in fr.; ripe caps. acute, shorter than sep. P. 4-5. *Wds.*!—*Chocolate.*
3. P. Forsteri. Pedicels all erect in fr.; ripe caps. about as long as sep. P. 4-5. *Wds.*!—*Brown.*

** *Fl. sess., clustered in heads; sep. wh.*

4. † L. nivea. Ped. about 4-fld. P. 6-7. *Sco. wds.*!—*Wh.*

*** *Fl. sess., clustered in heads in a very branched pan.*

5. L. sylvatica. L. linear-lanc.; no appendage to seed. P. 5. *Wds.*

**** *Fl. sess., in heads; some or all of the heads sess.*

6. L. campestris. Heads 3-4, sess. and stalked; seeds globose. P. 4-5. *Mead.—Chocolate.*
7. L. multiflora. Heads several, sess., or some stalked; seeds oblong. P. 4-6. *Wds.*
8. L. arcuata. Heads 3-4-fld., 1 head sess., 2 or 3 on drooping ped.; L. channelled, scarcely hairy. P. 7. *Sco. Alps!*
9. L. spicata. Heads sess., clustered into a lobed drooping spike. P. 7. *Mtns.*

Order 95.—CYPERACEÆ.

475. Ca'rex. Sedge.

In this genus, the term "fruit" always refers to the form on the flask-shaped capsule, not to the enclosed achene or nut. If

those species with sheathing bracts, those of the lowest F. spikes are to be examined, as giving the character; the upper ones are often different. The glumes (unless otherwise stated) are those of the F. spikes, and the fruit should always be examined when full-grown.

SECT. I.—Spike single, simple.

* *Diœcious.*

1. C. dioica. Fr. ov., erect or spreading; M. spike linear. P. 5-6. *Bogs.*

** *Monœcious.*

2. C. pulicaris. Stig. 2; M. fl. on upper part of spike; ripe fr. deflexed. P. 6. *Bogs.*
3. C. pauciflora. Stig. 3; M. fl. 1 or 2; F. fl. 2 or 4; ripe fr. linear-lanc., deflexed; gl. deciduous. P. 6. *Mtn. Bogs.* !
4. C. rupestris. Stig. 3; spike many-fld.; M. fl. most numerous; fr. obovate, erect; gl. persistent. P. 8. *Sco. Mtns.* !

SECT. II.—Fl. in spikelets, containing both M. and F. fl., and arranged in branches of a more or less branched panicle (*not a spike*); stig. 2.

5. C. paniculata. St. acutely triangular, sides flat. P. 6. *Mar.*
6. C. paradoxa. St. obtusely triangular, sides convex. P. 7. *Mar.* !

SECT. III.—M. and F. fl. not in distinct spikes; spikel. sess., crowded, forming a compound spike.

* *St. tufted; M. fl. only at top of spikel.*

7. C. teretiuscula. Upper spikel. simple, lower compound, or all simple, crowded into a dense compound spike; st. obtusely triangular, rough above, faces convex. P. 5-6. *Mar.*
8. C. vulpina. Spikel. compound, sess., in a dense spike; st. stout, acutely triangular, angles rough, sides concave; clusters of spikel. with a subulate bract. P. 5-6. *Wet pl.*
9. C. muricata. Spikel. simple, sess., in a nearly close spike; st. slender, edges rough; gl. brown. P. 5-6. *Moist past.*
10. C divulsa. Spikel. simple, upper clustered, lower distant; st. triangular, edges smooth below, rough above; gl. green; bracts short. P. 5-6. *Wds. and bks.*

** *St. tufted; M. fl. at end of spikel. and usually at base; F. fl. in middle; lowest spikel. compound; spikel. more or less remote below, crowded above.*

11. C. axillaris. Middle spikel. with bracts longer than spikel. P. 6. *Marshes* !
12. C. Boenninghausiana. Middle spikel. with bracts not longer than spikel. P. 6. *Marshes* !

*** *St. tufted; M. fl. only at base of spikel.; spike'. all simple, without bracts at the base, or only very short ones.*

13. C. stellulata. Spikel. 3-4, not very close; fr. stellately diverging, ov., with a cleft serrate beak. P. 5.6. *Boggy pl.*
14. C. ovalis. Spikel about 6, oval, close or nearly so; gl. brown, lanc., acute; fr. ov.-lanc., winged, beak cleft. P. 5-7. *Damp mead.*
15. C. leporina. Spikel. 3-4, oval, close; gl. reddish-brown, ov., obtuse; fr. ov., beak entire. P. 7-8 *Sco. mtns.*!
16. C. elongata. Spikel. many, lower rather distant; gl. ov., dark brown, with a green central line; fr. lanc., longer than gl.; beak nearly entire. P. 6. *Marshes*!
17. C. curta. Spikel. 4-6, oval, somewhat close; gl. ov., obtuse, whitish; fr. ov., beak short, entire. P. 6. *Bogs.*
18. C. Persoonii. Spikel. 4-8., ov. or obl., somewhat close; gl. ov., brown, obtuse; fr. ov., beak deeply 2-fid. P. 7-8. *Mtns.*!

**** *St. tufted; M. fl. only at base of spikel; all the spikel. with very long linear bracts.*

19. C. remota. Spikel. all simple, small, upper close, lower very remote; st. obtusely triangular. P. 6-7. *Damp sha. pl.*

***** *St. solitary, not tufted; root extensively creeping and throwing up flowering st. at intervals; spikel. with M. fl. at top.*

20. C. incurva. Spike dense, roundish-ov., usually curved downwards in fr.; fr. broadly ov., beak notched, not serrate; st. 2-3 inches high. P. 6 *Sea sh. in N.*
21. C. divisa. Spikes usually ov., erect in fr.; fr. ov., beak cleft, serrate; st. above 1 ft. high. P. 5-6. *Salt mar.*
22. C. arenaria. Spike oblong; upper spikel of M. fl., lower of F. fl., middle with both; fr. shorter than gl. P. 6. *Sea sh.*
23. C. intermedia. Spike oblong; upper and lower spikel. with F. fl.; middle ones with M. fl. only; fr. longer than gl. P. 5-6. *Marshes.*

****** *St. solitary, root extensively creeping; spikel. with M. fl. at base.*

24. C. brizoides. Spikel. about 5, close, curved; gl. pale brown, as long as fr.; fr. lanc., serrulate-ciliate from base; beak cleft. P. 7. *Wds. in N.*!

SECT. IV.—Spikes nearly sess., distinct or clustered into a compound spike; all the spikel. bearing F. fl.; term. one only with some M. fl. as well, usually at the base of the spikel.

25. C. Vahlii. Spikes 1-4, small, roundish or oval, sess., term.; gl. obtuse, almost black, shorter than fr. P. 7. *Sco. Alps.*!

26. C. atrata. Spikes 3-4, close, stalked, oblong, drooping in fr.; gl. black or nearly so, acute, not awned. P. 6-7. *Mtns.*!
27. C. canescens. Spikes 3-5, oblong, sess. (or 2 lowest with short stalks); gl. dark-brown, awned. P. 7. *Wet pl., Irel.*!

SECT. V. M. and F. fl. in distinct spikes; M. spike 1, (very rarely 2 or 3) term.; stig. 2.

* *Beak of fr. short, 2-fid.*

28. C. saxatilis. F. spikes 1 or 2; fr. nerveless, ov.; gl. dark-purp., obtuse, with a white tip. P. 6. *Sco. mtns.*
29. C. Grahami. F. spikes 2 or 3; fr. strongly nerved, narrow-ov.; gl. brown, acute. P. 7. *Sco. Mtns.*!

** *Beak of fr. short, entire; sheaths of L. with a net-work of fibres as if loosely sewn together.*

30. C. stricta. F. spikes sess., or nearly so, cylind., erect; bracts auricled; st. triquetrous. P. 5-6. *Wet pl.*

*** *Beak of fr. short or 0, entire; sheaths of L. without fibrous net-work.*

31. C. rigida. Spikes small, ov. or lanc., erect, sess., or lowest on a short stalk. P. 6-7. *Alp. rocks.*
32. C. aquatilis. F. spikes long, cylind., narrower below, usually tipped with M. fl.; st. trigonous, smooth at edges. P. 7-8. *Sco. Alps.*
33. C. acuta. F. spikes long, cylind., usually tipped with M. fl.; st. triquetrous, rough above; lowest bract with long auricles; gl. lanc., acute. P. 6. *Wet pl.*
34. C. vulgaris. F. spikes cylind.; st. triquetrous, rough above; bracts with short auricles; gl. ov. or oblong, obtuse. P. 5-6. *Wet pl.*

SECT. VI. M. and F. fl. in distinct spikes; stig. 3; fr. downy, often minutely so, but not glabrous.

* *M. spike never more than* 1; *beak of fr. short, notched, or cleft.*

35. C. pilulifera. F. spikes roundish, sess.; fr. roundish, downy; gl. of M. spikes acute; st. usually curved. P. 5. *Hea.*
36. C. montana. F. spikes ov., sess., often single; fr. narrow-obovate, triangular, hairy; gl. of M. spikes obtuse; st. erect. P. 4-5. *Hilly pl., S. and W. Eng.*!

** *M. spikes never more than* 1; *beak of fr. entire or* 0; *all the bracts membranous, sheathing.*

37. C. digitata. F. spikes linear, distant, erect, near top of st.; L. shorter than st.; gl. reddish-brown. P. 4-5. *Wds.*!

38. C. clandestina. F. spikes about 3-fld., almost *enclosed in* bracts near base of st.; L. longer than st. P. 4-5. *Calc. rocks*!
39. C. ericetorum. F. spikes ov.; bracts clasping; sheaths short; gl. obovate, ciliate. P. 5. *Chalky hills*!

**** M. spikes never more than* 1; *beak of fr. entire or* 0; *lower bracts leafy.*

40. C. præcox. M. spike broadest near top; gl. ov., acuminate; fr. minutely downy, with short beak. P. 4-5. *Mead.*
41. C. tomentosa. M. spike lanc.; gl. ov., acute; fr. roundish-obovate, densely wh.-downy. P. 4-5. *Wet mead.*!

***** M. spikes usually* 2 *or* 3.

42. C. hirta. Sheaths long, hairy; F. spikes distant, stalked, erect; gl. awned; L. hairy; beak of fr. long, cleft. P. 4-5. *Wet pl.*
43. C. filiformis. Sheaths 0.; F. spikes distant, sess.; L. glabrous; beak of fr. short, cleft. P. 5. *Bogs.*

SECT. VII. M. and F. fl. in distinct spikes; stig. 3; fr. glabrous, (not hairy or downy), beak of fr. entire or 0.; M. spikes scarcely ever more than 1.

* *F. spikes short* (*varying from globose to oblong*) *usually erect.*

44. C. pallescens. Sheaths scarcely any; fr. obovate, blunt, beak 0.; F. spikes pale green. P. 6. *Wds.*
45. C. panicea. Sheaths long, ped. ½-enclosed; fr. roundish, inflated, pale gr., beak short; gl. dark-brown with a central gr. line. P. 6. *Wet. pl.*
C. Glauca. (50.) fr. rough, not hairy.

** *F. spikes short, long stalked, drooping in fr.*

46. C. capillaris. All the ped. of F. spikes enclosed in 1 sheath; spikes lax; fr. obovate-oblong. P. 6-7. *Sco. Alps.*!
47. C. rariflora. Sheaths hardly any; fr. oblong; gl. nearly black, broad, obtuse. P. 6-7. *Sco. Alps.*!
48. C. limosa. Sheaths 0.; fr. roundish-ov., strongly nerved; gl. mucronate, purp., with a gr. line; upper narrowest. P. 6-7. *Boys.*!
49. C. irrigua. Sheaths 0.; fr. roundish-ov., scarcely nerved; gl. ov.-lanc, acuminate, all purp., upper broadest. P. 6-7. *Bogs.*!
50. C. glauca. Sheaths scarcely any; lower spikes usually drooping in fr.; gl. ov., acute, dark-brown; fr. often rough, not downy or hairy, roundish-ov.; L. glaucous. P. 4-5 *Hea. and damp pl.*

**** F. spikes long, linear, drooping in fr.*

51. C. strigosa. Spikes very slender, loose; gl. ov.-lanc., pale green; fr. lanc. P. 5-6. *Wds.!*
52. C. pendula. F. spikes cylind., very long, close; gl. ov., brown; fr. ov.; beak very slightly notched; st. 2-5-ft. high; L. broad. P. 5-6. *Wds.*

C. glauca (50). F. spikes cylind.; beak of fr. 0.

SECT. VIII. M. and F. fl. in distinct spikes; stig. 3; fr. glabrous (not hairy or downy); beak of fr. cleft.

** M. spike* 1; *F. spikes short, (usually varying from globose to oblong,) usually erect; gl. acute, not mucronate; bracts long, sheathing; beak rather long.*

53. C. depauperata. F. spikes 3-4-fld., distant; fr. globose, large, inflated. P. 5-6. *Wds.!*
54. C. punctata. F. spikes cylind.; fr. ov., dotted; gl. ov., awned. P. 5-6. *Mar. near sea!*
55. C fulva. F. spikes ov.-oblong, distant; fr. ov.; gl. ov., acute, not awned. P. 6-7. *Boggy pl.*

*** M. and F. spikes as last; gl. mucronate; beak of fr. short.*

56. C. extensa. Sheaths and ped. very short; F. spikes near together; bracts very long, channelled, spreading. P. 6. *Salt mar.*
57. C. distans. Sheaths and ped. long; F. spikes distant; ped. inclosed in sheath; fr. ov. P. 6. *Mar.*

**** M. and F. spikes as last; gl. obtuse.*

58. C. flava. F. spikes roundish or ov., near together, nearly sess.; fr. gradually narrowed into a bent beak; bracts long. P. 5-6. *Bogs.*
59. C. Œderi. F. spikes roundish or ov., near together, nearly sess.; fr. cuspidate into a straight beak; bracts long. P. 5-6. *Bogs.*
60. C. vaginata. F. spikes oblong, distant; ped. not wholly enclosed in the wide, loose sheaths; beak short, notched. P. 7. *Sco. mtns.*

***** M. spike* 1; *F. spikes (at all events the lowest ones) long, lanc., or linear, cylind.*

61. C. binervis. F. spikes usually erect; fr. ov., with 2 green ribs; gl. dark, mucronate. P. 6-7. *Dry Hea.*
62. C. lævigata. F. spikes erect or drooping in fr.; fr. narrow-ov., acuminate; gl. pale brown or purplish, acute. P. 6. *Mar.*
63. C. sylvatica. F. spikes very slender, lax, drooping in fr.; fr. ov., acuminate; gl. pale gr. P. 5-6. *Wds.*

64. C. Pseudo-cyperus. F. spikes cylind., dense, drooping in fr., on long ped.; fr. lanc., acuminate; gl. subulate; st. triquetrous. P. 5-6. *Wet pl.*

***** *M. spikes* 2 *or* 3; *sheaths* 0.

65. C. vesicaria. St. triquetrous; F. spikes rather short, cylind., stalked; fr. ov., acuminate, with a long beak. P. 5-6. *Bogs, etc.*

66. C. ampullacea. St. trigonous; F. spikes cylind., on short stalks; fr. roundish, inflated, suddenly contracted into a long beak. P. 6. *Bogs, etc.*

67. C. riparia. St. triquetrous; F. spikes long, cylind., often tipped with M. fl.; gl. of M. spikes acute. P. 4-5. *Riv. st., etc.*

68. C. paludosa. St. triquetrous; F. spikes long, cylind.; gl. of M. spikes obtuse. P. 5. *Wet pl.*

476. KOBRE'SIA.

1. K caricina. Spikes 4 or 5, alt.; L. radical, linear, channelled. P. 7-8. *Wet pl. on mtns.*

477. CYPE'RUS. Galangale.

1. C. longus. Spikel. 5-12 together, lanc.. reddish-brown, alt,; heads in a compound or twice-compound umb.; umb. with 2-3 long, leafy bracts at base; stems single, triangular, erect. P. 7-9. *Wet pl.*!

2. C. fuscus. Spikel. all crowded into roundish heads; st. several, spreading or nearly prostrate, with 3 unequal bracts at base. A. 8-9. *Wet pl.*!

478. SCHŒ'NUS. Bog Rush.

1. S. nigricans. Head ov.; st. stiff, leafless, erect; inv. 2-leaved, 1 bract longer than spike. P. 6. *Bogs.*

479. BLYS'MUS. Club Rush.

1. B. compressus. Spikel. 10-12, each 6-8-fld.; L. flat, keeled. P. 6-7. *Bogs.*

2. B. rufus. Spikel. about 6, each 2-4-fld.; L. almost setaceous, grooved. P. 7. *Mar. near sea.*

410. RHYNCHOS'PORA. Beak Rush.

1. R. alba. Stam. 2; spikes wh.; bract about as long as head of spikel. P. 7-8. *Bogs.*

2. R. fusca. Stam. 3; spikes brown, outer bract much longer than head of spikel. P. 7-8. *Bogs*!

481. Eriophʻorum. Cotton Grass.

* *Spike single, term.*

1. E. alpinum. Spike very small, scarcely thicker than st. P. 4-6. *Alp. bogs* !
2. E. vaginatum. Spike ov. or oblong; L. setaceous. P. 4-5. *Bogs.*

** *Spikes more than* 1, *term.*

3. E. angustifolium. Ped. glabrous; st. terete; L. linear, upper ½ triangular. P. 4-6. *Bogs.*
4. E. latifolium. Ped. scabrous; st. triangular above; L. linear, upper ½ triangular. P. 4-6. *Bogs.*
5. E. gracile. Ped. downy; st. triangular above; L. linear, triangular throughout. P. 4-6. *Bogs* !

482. Eleocʻaris. Club Rush.

* *Stig.* 2.

1. E. palustris. Lowest gl. ½ surrounding spike; spike ov.-lanc. P. 6-7. *Wat. pl.*
2. E. uniglumis. Lowest gl. surrounding spike; spike ov.-lanc. P. 6. *Wet pl. near sea.*

** *Stig.* 3.

3. E. multicaulis. Spike oblong, nearly ½ inch long. P. 7. *Wet pl.*
4. E. acicularis. Spike ov., very small; st. setaceous. P. 7-8. *Damp hea.*

483. Scirʻpus. Club Rush.

* *St. triangular*; *spikes many, clustered, with leafy bracts*; *stig.* 3.

1. S. maritimus. Spikes large, oblong, chiefly sess., clustered in 1-3 term. heads; gl. 2-fid., with a point between. P. 7-8. *Salt mar.*
2. S. sylvaticus. Spikel. small, ov., stalked or sess. in clusters on branches of a very compound pan.; gl. entire. P. 7-8. *Wet pl.*

** *St. triangular above; spikes several in a lateral cluster*; *bracts* 0; *stig.* 2.

3. S. carinatus. St. terete below, obtusely triangular above. P. 8. *Riv. bks.* !
4. S. triqueter. St. acutely triangular; spikes small, sess. and stalked, gl. 2-fid.; lobes rounded. P. 8. *Riv. bks.* !
5. S. pungens. St. acutely triangular; spikes few, all sess.; gl. 2-fid, lobes acute. P. 6-7. *Ch. Is.* !

*** *St. terete; spikes in a compound cluster, generally lateral.*

6. **S. lacustris.** Stig. usually 3; gl. glabrous, notched. P. 6-8. *Streams and ponds.* Bull Rush.

7. **S. Tabernæmontani.** Stig. 2; gl. rough, notched; pl. and spikes much smaller than last. P. 6-8. *Brackish water.*

**** *St. terete; spike solitary, term.*

8. **S. cæspitosus.** 2 outer gl. as long or longer than the spike; bristles 6, longer than achene. P. 6-7. *Hea. and mtns.*

9. **S. pauciflorus.** 2 outer gl. shorter than spike; bristles 6, shorter than achene. P. 6-8. *Bogs!*

484. CLA'DIUM. Prickly Bog Rush.

1. **C. Mariscus.** Pl. 3-6-ft. high. P. 7-8. *Bogs.*

485. ISOLE'PIS. Mud Rush.

* *Spikes many, crowded in globose heads.*

1. **I. Holoschænus.** St. terete; L. subulate. P. 8-11. *San. Co.!*

** *Spikes 1-3, apparently lateral; stig. 3; st. simple.*

2. **I. setaceus.** Stam. 2; fr. obovate, ribbed, bluntly 3-angled. A. 7-8. *Wet pl.*

3. **I. Savii.** Stam. 3; fr. nearly globose, rough with minute points. P. 7. *Near sea.*

*** *Spikes solitary, term.; stig. 2; st. branched.*

4. **I. fluitans.** Spike ov., small; st. filiform. P. 6-8. *Dit. and ponds.*

ORDER 96.—GRAMINEÆ.

486. NAR'DUS. Mat Grass.

1. **N. stricta.** St. wiry, erect; spike slender. P. 6-7. *Hea.*

487. KNAP'PIA. Knappia.

1. **K. agrostidea.** Spikel. 5-10, alt., mostly sess. A. 3-4. *San. pl.!*

488. CY'NODON. Dog's-tooth Grass.

1. **C. Dactylon.** Spikes 3-5; root creeping. P. 7-8. *S. Co.!*

489. DIGITA'RIA. Finger Grass.

1. † **D. sanguinalis.** L. hairy; fl. purplish; st. ascending. A. 7-8. *San. fds.!*

2. **D. humifusa.** L. glabrous; fl. downy; st. prostrate. A. 7-8. *San. fds!*

490. SPARTI'NA. Cord Grass.

1. **S. stricta.** Spikes 2 (rarely 3), adpressed; gl. hairy. P. 7-8. *Mud. sh.*
2. **S. alterniflora.** Spikes several, adpressed; gl. glabrous. P. 7-8. *Mud. sh.*!

491. PAN'ICUM. Panick Grass.

1. † **P. crus galli.** Spikel. ov., awned, crowded; rachis rough. A. 7-8. *Corn-fds.*!

492. LEPTU'RUS. Hard Grass.

1. **L. incurvatus.** Spikes curved or straight, very slender, hardly distinguishable from the st.; fl. close-pressed. A. 7-8. *Salt mar.*

493. ANTHOXAN'THUM. Sweet-scented Vernal Grass.

1. **A. odoratum.** Gl. about as long as awns. P. 5. *Mead.*

494. SETA'RIA. Bristle Grass.

1. † **S. verticillata.** Spike lobed, whorled below; bristles of fl. many, with teeth pointing downwards. A. 7-8. *Fds.*!
2. **S. viridis.** Spike continuous; bristles of fl. 2-3, with teeth pointing upwards. A. 7-8. *Fds.*!
3. † **S. glauca.** Spike continuous; bristles of fl. many, with teeth pointing upwards; pal. wrinkled. A. 8-9. *Fds.*!

495. AMMOPH'ILA. Marram.

1. **A. arenaria.** Pan. or spike lanc. or linear; L. stiff, involute, pungent; whole pl. whitish or glaucous. P. 7-8. *San. sh.*

496. PHAL'ARIS. Canary Grass.

1. † **P. Canariensis.** Spike ov., dense, tiled; gl. winged on keel, variegated wh. and gr. A. 7. *Waste pl.*
2. † **P. paradoxa.** Rac. spike-like, ov.-cylind. A. 7. *Corn-fds.*!
3. **P. arundinacea.** Pan. spreading or close; gl. not winged. P. 6-7. *Riv. si.*

497. PHLE'UM. Timothy Grass.

* *Gl. truncate.*

1. **P. pratense.** Spike cylind.; gl. ciliate on keel; awn ½ as long as gl. P. 6-8. *Mead.*
2. **P. alpinum.** Spike ov.-oblong; gl. ciliate on keel; awn nearly as long as gl. P. 7. *Sco. Alp. moors.*
3. **P. asperum.** Spike cylind.; gl. cuneate, swelled upwards, apiculate, rough; awn 0. A. 7. *Dry Fds.*!

** *Gl. acute, not truncate.*

P. Boehmeri. Spike cylind.; gl. linear-lanc., outer scarcely ciliate; st. purp. P. 7. *Dry Fds.*!

5. P. arenarium. Spike ov.-cylind., obtuse; gl. lanc., ciliate on keel. A. 6-7. *San. sh.*

498. GASTRID'IUM. Nit Grass.

1. G. lendigerum. Gl. twice as long as pal.; awn of pal. longer than flor., often absent. A. 7-8. *S. Eng.*

499. ALOPECU'RUS. Fox-tail Grass.

* *St. decumbent at base, not bulbous.*

1. A. geniculatus. Awn about twice as long as pal.; anth. linear, purplish (dull yell. when old); st. kneed. P. 6-7. *Waste pl.*

A. fulvus. Awn not so long as pal.; anth. short, thick, orange. P. 6-7. *Wat. pl.*

St. decumbent or ascending, bulbous at base.

A. bulbosus. Pal. ½ as long as awn. P. 6-7. *Salt mar.*

*** *St. erect; roots fibrous or creeping.*

4. A. alpinus. Spike ov.; upper L. much shorter than inflated sheath; awn rather longer than pal., scarcely projecting beyond the gl. P. 7. *Sco. Alps*!

5. A. pratensis. Spike oblong-cylind., obtuse; awn twice as long as pal., considerably projecting beyond gl. P. 5-6. *Past.*

6. A. agrestis. Spike very long, linear-cylind., tapering; awn about twice as long as pal. A. 7. *Corn-fds.*

500. POLYPO'GON. Beard Grass.

1. P. littoralis. Awn as long as gl.; fl. acute, almost glabrous; pan. lobed, purplish. P. 6-8. *Salt mar.*!

2. P. monspeliensis. Awn 2-3 times as long as gl.; gl. obtuse, hairy; pan. lobed, silky. A. 6-8. *Salt mar.*!

501. LAGU'RUS. Hare's Tail Grass.

1. L. ovatus. Spike soft, woolly; L. broad, downy. A. 6. *Ch. Is.*!

502. HOR'DEUM. Barley.

* *Lateral flor. perfect; middle one usually bar.*

1. H. sylvaticum. Awn twice as long as pal.; gl. rough. P. 6-8. *Calc. wds.*

** *Lateral flor. bar.; centre one perfect; all with barbed awns.*

2. H. pratense. Gl. all setaceous, rough, not ciliate. P. 6-8. *Mead.*
3. H. murinum. Gl. of middle fl. lanc., ciliate; of lateral fl. setaceous, rough. A. 6-8. *Ro. si.*
4. H. maritimum. Outer gl. of lateral fl. subulate, inner ½ ovate, rough; awns stiff, spreading. A. 6-8. *Sea co.*

503. LEER'SIA. Cut Grass.

Pan. usually concealed in the sheath; branches wavy; L. very rough, flat when growing, involute when gathered. P. 8-9. *Ro. si.*!

504. MIL'IUM. Millet Grass.

1. M. effusum. Pan. lax, much branched; pal. acute, green, glabrous; L. broad, flat. P. 6-7. *Wds.*

505. MEL'ICA. Melic Grass.

1. M. uniflora. Pan. branched, lax; spikel. erect, with 1 perfect fl. P. 5-6. *Wds.*
2. M. nutans. Pan. racemose, nearly simple, secund; spikel. drooping, with 2 perfect fl. P. 5-7. *Hilly wds.*

506. CALAMAGROS'TIS. Small Reed.

* *Hairs longer than pal.*

1. C. lanceolata. Pan. lax, erect, or nearly so, purplish; gl. lanc.; st. tall, very slender. P. 7. *Wds., etc.*
2. C. Epigejos. Pan. close, erect, green or purplish-green; gl. subulate; st. stouter, erect. P. 7. *Wds., etc.*

** *Hairs shorter than pal.*

3. C. stricta. Pan. close, erect; gl. ov.-lanc. P. 6. *Lakes and bogs*!

507. APE'RA. Silky Bent Grass.

1. A. Spica venti. Pan. lax, spreading; awn very long; anthers linear-oblong. A. 6-7. *San. fds.*
2. A. interrupta. Pan. close, interrupted, lower branches distant; awns very long; anthers roundish. A. 6-7. *Sam. fds.*!

508. AGROS'TIS. Bent Grass.

* *Pal. awned; lig. acute; L. setaceous.*

1. A. canina. Awn bent from below mid. of pal., and longer than it; sheaths glabrous; branches of pan. long and flat. P. 6-8. *Heaths, etc.*

2. **A. setacea.** Awn bent and twisted from base of pal. and twice as long; sheaths rough; branches of pan. short. P. 7-8. *S. Eng.*

** *Pal. not awned.*

3. **A. vulgaris.** Lig. abrupt, short; branches of pan. glabrous. P. 7-8. *Dry pl.*
4. **A. alba.** Lig. long, acute; branches of pan rough. P. 6-7. *Mead., etc.*

509. TRIT'ICUM. Wheat Grass. Couch Grass.

* *Awn longer than its flor.*

1. **T. caninum.** Spikel. 4-5-fld.; L. flat, rough; root fibrous; P. 6-8. *Wds. and hedg.*

** *Awn shorter than its flor. or* 0.

2. **T. repens.** Spikel. 4-8-fld.; gl. and pal. acute; pal. often awned; L. flat and gr., or involute and glaucous, not thorny. P. 6-8. *Fds. and hedg.*
3. **T. junceum.** Spikel. 4-6-fld., rather distant; gl. and pal. obtuse, awnless; rachis brittle at the notches; L. involute, downy above, thorn pointed. P. 7. *San. sh.*
4. **T. laxum.** Spikel. 4-8-fld.; gl. and pal. obtuse; L. flat, rough above. P. 7-8. *San. sh.*

510. LO'LIUM. Darnel.

1. **L. perenne.** Spikel. 6-8-fld., longer than gl.; awn 0, or short. P. 6-7. *Fds.*
2. † **L. multiflorum.** Spikel. 9-14-fld., longer than gl.; outer pal. with a long awn. A. 6. *Fds.*
3. † **L. linicola.** Spikel. ov. or oblong, 7-11-fld.; awn short or 0; gl. about ½ as long as spikel.; flor. swelled in fr. A. 6-7. *Flax fds.*!
4. **L. temulentum.** Spikel. about 6-fld.; gl. as long or longer than spikel., outer pal. awned or awnless; flor. swelled in fr. A. 6. *Corn-fds.*!

511. ELY'MUS. Lyme Grass.

1. **E. arenarius.** Spikes erect, stout, close; gl. downy, as long as spikel.; L. involute, thorn-pointed. P. 7. *San. sh.*
2. **E. geniculatus.** Spike long, lax, bent downwards; gl. glabrous, longer than spikel.; rachis winged. P. 7. *Salt mar.*!

512. BRACHYPO'DIUM. Wood Grass.

1. **B. sylvaticum.** Spike usually drooping; awns of upper fl. longer than pal.; L. soft, hairy above; root fibrous. P. 7. *Wds. and hedg.*

2. **B. pinnatum.** Spike erect; awns of upper fl. shorter than pal.; L. stiff, nearly glabrous; root creeping. P. 7. *Calc. soils.*

513. CYNOSU'RUS. Dogs-tail Grass.

1. **C. cristatus.** Spike linear; cor. with very short awns; bracts pectinate, awnless. P. 7. *Mead.*
2. **C. echinatus.** Spikes ov., compound; flor. with long awns. P. 7. *San. grd.*!

514. SESLE'RIA.

1. **S. cerulea.** Outer pal. 3-4 toothed; L. flat. P. 4-5. *Mtns.*

515. KŒLE'RIA.

1. **K. cristata.** Spike-like pan., somewhat close, interrupted below, outer pal. acute; L. rough and ciliate on edges. P. 6-8. *Dry past.*

516. TRIO'DIA.

1. **T. decumbens.** Spikel. oval, 3-4-fld.; gl. about as long as fl.; barren st. decumbent, flowering st. erect. P. 7. *Dry past.*

517. HIEROCH'LOE. Northern Holy Grass.

1. **H. borealis.** Spikel. roundish-ov., shining brown; gl. ovate, acute. Sweet scented when dry. P. 5-7. *N. Sco.*!

518. PO'A. Meadow Grass.

* *Flor. with a cottony web at base; lig. acute.*

1. **P. bulbosa.** Pan. close; st. bulbous at base; spikel. 3-4-fld.; L. finely serrate. P. 4-5. *San. sh.*!
2. **P. trivialis.** Pan. spreading; spikel. 2-3-fld.; sheaths roughish; no bulbs. P. 6-7. *Mead.*

** *Flor. with a cottony web at base; lig. obtuse.*

3. **P. nemoralis.** Pan. very lax, spreading (sometimes close and narrow), with hair like branches; spikel. 2-4-fld.; st. very slender. P. 6-7. *Wds.*
4. **P. compressa.** St. much flattened, specially below, decumbent at base; pan. erect, close or slightly spreading; spikel. 4-8-fld.; lig. short; upper L. about as long as sheath. P. 7-8. *Walls and dry pl.*
5. **P. pratensis.** Pan. spreading; spikel. 3-4-fld.; upper L. much shorter than sheath; lig. large. P. 6-7. *Mead.*
6. **P. Balfourii.** Pan. erect, slender; spikel. 3-fld.; lig. large; uppermost joint below middle of st. P. 7. *Sco. mtns.*!

*** *Flor. not webbed at base; lig. (at least of upper L.) acute.*

7. **P. laxa.** Pan. slender, slightly drooping; spikel. 3-fld.; st. very slender: uppermost joint usually concealed. P. 7. *Sco. Alps.* !

8. **P. alpina.** Pan. erect, spreading in fl., ov. and close in fr.; spikel. 3-4-fld.; pal. 3-nerved; uppermost joint of st. exposed. P. 6-7. *Mtns.*

9. **P. annua.** Pan. erect, spreading; spikel. 5-6-fld.; pal. 5-nerved; st. ascending or procumbent. A. 3-10. *Past.*

**** *Flor. not webbed at base; lig. obtuse, upper L. shorter than its sheath.*

10. **P. Parnellii.** Pan. erect, rather close; spikel. 2-3-fld.; lig. very short. P. 7. *Rocky pl.*

***** *Fl. not webbed at base; lig. obtuse; upper L. as long as or longer than its sheath.*

11. **P. polynoda.** Lig. large; spikel. of 4-5 obtuse fl. P. 6-7. *Dry pl.*

12. **P. cæsia.** Lig. short; spikel. of 3-5 acute fl.; uppermost joints concealed, near base of st. P. 7. *Mtns.*

13. **P. montana.** Lig. short; spikel. 2-3-fld.; pan. close, slender. P. 6. *Sco. Alps.* !

519. BRI'ZA. Quaking Grass.

1. **B. media.** Spikel. 6-8-fld, lowest fl. longer than gl.; lig. obtuse, short. P. 6. *Past.*

2. **B. minor.** Spikel. about 7-fld., lowest fl. shorter than gl.; lig. acute, long. A. 7. *Corn-fds.*

520. CATABRO'SA. Water Hair Grass.

1. **C. aquatica.** St. decumbent at base, often rooting at nodes; L. broad; branches of pan. ½-whorled. P. 6-7. *Dit. etc.*

521. GLYCE'RIA. Sweet Grass.

1. **G. aquatica.** St. erect, reed-like, tall; lig. short, obtuse; pan. very large, spreading; spikel. 5-10-fld. P. 7. *Wat. pl.*

2. **G. fluitans.** Aquatic; st. decumbent or ascending, rooting at lower nodes; lig. acute; spikel. 7-20-fld. P. 6-8. *Wat. pl.*

522. SCHLEROCH'LOA.

* *Pan. compact, close, rigid.*

1. **S. loliacea.** Pan. racemose, nearly simple; spikel. secund, 8-12-fld.; rachis zig-zag. A. 6-7. *Sea Co.*

2. **S. procumbens.** Pan. branched, close, ov., one-sided, branches in 2 rows, rigid; spikel. 3-4-fld.; st. procumbent. A. 7-8. *Salt mar.*

** *Pan. rigid, wiry; branches usually spreading, in 2 rows more or less pointing to one side.*

3. S. rigida. Spikel. 7-10-fld.; whole pl. wiry. A. 6. *Walls, etc.*

*** *Pan. spreading; spikel. 3-8-fld.*

4. S. maritima. L. involute; branches of pan. stiff, somewhat erect, lower usually in pairs; st. creeping and rooting at base. P. 6-7. *Sea Co.*

5. S. distans. L. flat; branches of pan. at length spreading, lower in fours, deflexed in fr.; outer pal. obtuse; st. usually tufted, decumbent at base, not rooting. P. 7-8. *Sea Co., etc.*

6. S. Borreri. L. flat; branches of pan. spreading in fr.; lower in fours; outer pal. mucronate; st. usually tufted. P. 6. *Salt mar.*

523. MOLIN'IA. Blue Melic Grass.

1. M. cerulea. Pan. long, narrow. P. 6-8. *Wet Hea.*

524. PHRAGMI'TES. Reed.

1. P. communis. St. tall, erect. P. 7-8. *Wat. pl.*

525. CORYNE'PHORUS. Grey Hair Grass.

1. C. canescens. L. setaceous; st. numerous, tufted. P. 7. *San. Co.*!

526. HOL'CUS. Soft Grass.

1. H. mollis. Gl. acute; awn projecting beyond gl.; joints of st. with a distinct downy tuft. P. 7. *Hedg. and past.*

2. H. lanatus. Gl. rather obtuse; awn curved, inclosed within gl.; joints of st. without a distinct tuft of hairs. P. 7. *Mead.*

527. BRO'MUS. Brome Grass.

* *Awn much longer than flor.; L. downy.*

1. B. sterilis. Pan. drooping; spikel. linear-lanc., about 7-fld.; ped. very long; pal. glabrous. A. 6. *Hedg., etc.*

2. B. maximus. Pan. erect, spreading or drooping in fr.; spikel. lanc., about 5-fld.; pal. downy. A. 7. *Ch. Is.*!

** *Awn about as long as flor.; spikel. linear-lanc. or linear.*

3. B. madritensis. Pan. erect; ped. short; spikel. about 10-fld.; stam. 2; upper gl. 3-5-veined, lower 1-veined; pal. nearly equal. A. 6-7. *Dry pl.*

4. † B. arvensis. Pan. spreading, scarcely drooping; pal. equal; lower ped. long; upper gl. 7-9-veined, lower 3-5-veined; stam. 3; L. hairy. A. 7. *Corn-fds.*!

5. † **B. tectorum.** Pan. drooping, one-sided; pal. very unequal. **A.** 5-6. *Dry pl.*

*** *Awn about as long as flor.; spikel. broadly lanc. or ov., glabrous.*

6. **B. secalinus.** Pan. lax, drooping in fr.; spikel. 7-10-fld., loosely tiled in fl., separated and cylind. in fr.; L. hairy, sheaths glabrous. **A.** 6-7. *Corn-fds.*

7. **B. racemosus.** Pan. close, erect, nearly simple; spikel. ov., 5-10-fld., closely tiled; L. and sheaths slightly hairy. **P.** 6. *Fds.*

8. **B. commutatus.** Pan. lax., branched, erect or somewhat drooping; spikel. about 11-fld., somewhat loosely tiled; ped. often longer than spikel.; L. and sheaths hairy. **A.** 6-7. *Fds.*

**** *Awn about as long as flor.; spikel. ov. or nearly so, downy.*

9. **B. mollis.** Pan. erect; spikel. 5-10-fld. **B.** 6-7. *Fds.*

***** *Awns about ½ as long as spikel.; flor. lanc. or linear-lanc., 5-12-fld.; sheaths with long hairs.*

10. **B. erectus.** Pan. erect, or nearly so; spikel. usually purplish; L. narrow; hairs of sheaths pointing upwards. **P.** 7. *Dry pl.*

11. **B. asper.** Pan. drooping; st. tall; L. broad; hairs of sheath pointing downwards. **A.** 7-8. *Wds. and hedg.*

528. FESTU'CA. Fescue Grass.

* *Awns longer than flor.; fl. in a lax pan.*

1. **F. gigantea.** Pan. usually drooping, sometimes erect, lax; spikel. 3-5-fld.; lig. auricled. **P.** 7-8, *Wds., etc.*

Awns longer than flor.; flor. spiked or in a narrow pan.; stam. 1 *or* 3.

2. **F. uniglumis.** Stam. often 3; spikel. in 2 rows in a secund spike; lower gl. obsolete. **A.** 6. *San. sh.*

3. **F. bromoides.** Pan. erect, short, slightly spreading; upper gl. as long as lowest fl.; stam. 1. **A.** 6-7. *Dry pl.*

4. **F. myurus.** Pan. very long, close, somewhat drooping; upper gl. shorter than lowest fl. **A.** 6-7. *Walls.*

*** *Awns shorter than flor.; stam.* 3; *root L. involute, setaceous.*

5. **F. ovina.** Root fibrous; upper part of st. angular, rough; all L. setaceous-involute; pan. close; spikel. 4-6-fld. **P.** 6-7. *Dry past.*

6. **F. duriuscula.** Root fibrous, upper part of st. glabrous; st.-L. flat; pan. spreading; spikel. about 6-fld. **P.** 6-7. *Past.*

7. **F. rubra.** Root creeping; upper L. flat, rarely involute; pan. spreading; spikel. 4-10-fld. **P.** 6-7. *Dry san. pl.*

******** *Fl. awnless, or nearly so.*

8. **F. sylvatica.** Pan. erect or slightly drooping, much branched; spikel. 3-5-fld.; awn 0; gl. linear-subulate; lig. of upper L. large; pal. narrow; L. broad. **P.** 7. *Mtn. wds.*
9. **F. arundinacea.** Pan. somewhat drooping, much branched, spreading, branches bearing 2-15 spikel.; upper lig. very short; spikel. 5-6-fld. **P.** 6-7. *Damp mead.*
10. **F. pratensis.** Pan. erect, spreading, nearly simple, branches in pairs, one bearing 3-4 spikel., the other only 1; spikel. 5-10-fld. **P.** 6-7. *Mead.*
11. **F. loliacea.** Spiked; spikel. solitary, 10-12-fld. **P.** 6-7. *Mead.*

529. DAC'TYLIS. Cock's-foot Grass.

1. **D. glomerata.** Spikel. in dense ov. clusters; branches of pan. unilateral, distant; L. flat, rough. **P.** 6-7. *Past.*

530. AVE'NA. Oat Grass.

* *Lowest L. and sheaths hairy.*

1. **A. flavescens.** Pan. erect, lax, much branched; lig. short, obtuse; spikel. small, about 3-fld. **P.** 7. *Dry past.*
2. **A. pubescens.** Pan. rarely simple; lig. prominent, acute; spikel. 2-3-fld. **P.** 6-7. *Mead.*

** *Lowest L. and sheaths glabrous.*

3. † **A. strigosa.** Pan. lax, unilateral; spikel. drooping in fr., usually 2-fld.; outer pal. with 2 long bristles at end; fl. not hairy at base. **A.** 7. *Corn-fds.*
4. **A. fatua.** Pan. lax, erect; spikel. drooping in fr., about 3-fld.; fl. with long dusky hairs at base; lig. obtuse. **A.** 7-9. *Corn-fds.*
5. **A. pratensis.** Pan. erect, nearly simple; spikel. erect, 3-6-fld.; fl. not hairy at base; lig. acute. **P.** 6-7. *Dry past.*

531. ARRHENATHE'RUM. Oat Grass.

1. **A. avenaceum.** Pan. long, lax. **P.** 6-8. *Fds. and damp pl.*

532. AI'RA. Hair Grass.

* *Upper surface of L. ridged and furrowed; ridges with teeth pointing forwards.*

1. **A. cæspitosa.** Awn straight; st. tall; pan. large, much branched, spreading in fl.; L. long. **P.** 6-7. *Past.*
2. **A. alpina.** Awn bent and twisted at base; L. rigid, short. **P.** 6-8. *Sco. Alps.*

** *L. setaceous; awn much longer than pal.*

3. A. caryophyllea. Awn from below middle of pal.; outer pal. deeply 2-fid; pan. spreading. A. 6. *Dry pl.*
4. A. præcox. Awn from near base of pal.; outer pal. deeply 2-fid; pan. close. A. 4-6. *San. pl.*
5. A. flexuosa. Awn from near base of pal.; outer pal. toothed at end, not 2-fid; pan. spreading with wavy branches. P. 7. *Dry hea. etc.*

Order 97.—EQUISETACEÆ.

533. Equise'tum. Horse-tail.

* *Fert. st. unbranched, brownish, appearing before the bar. st.; bar. st. with whorls of branches.*

1. E. Telmateia. Fert. st., sheaths loose, crowded, teeth 30-40, linear-setaceous; bar. st., erect, stout, whitish; branches very many. P. 4. *Bks. and wds.*
2. E. arvense. Fert. st., sheaths 4 or 5, wide, teeth about 10; bar. st., mostly prostrate or decumbent, green, 10-14-furrowed. P. 3-4. *Corn-fds., etc.*

** *Fert. st. and sheaths whitish, usually simple, occasionally branched; teeth of sheaths pale brown; sheaths many; bar. st. with whorled branches.*

3. E. umbrosum. Sheaths of fert. st. 15-20-toothed; bar. st. erect, about 20-furrowed. P. 4. *Wet pl.*!

*** *Fert. st. simple, or very slightly branched, furrowed; bar. st. similar; branches (if present) not whorled.*

4. E. hyemale. St. always simple, whitish-gr., with 14-28 furrows; sheaths whitish in the middle, black at top and bottom, rarely toothed. P. 7-8. *Damp wds.*
5. E. trachyodon. St. simple or very slightly branched, long, usually erect, with 7-12 furrows; sheaths at length wholly black, teeth black, often deciduous. P. 7-8. *Mtn. glens*!
6. E. variegatum. St. simple or slightly branched, erect or procumbent, with 5-9 furrows; sheaths gr. below, black above; teeth black. P. 7-8. *Wet mtn. pl. or near sea.*

**** *Fert. st. more or less branched, rarely quite simple; bar. st. similar; branches simple.*

7. E. palustre. St. deeply furrowed, branches whorled; sheaths rather loose, with 8 acute teeth. P. 6-7. *Wet grd.*
8. E. limosum. St. smooth, very slightly 16-18-furrowed; sheaths close, with 16-20 short teeth. P. 6-7. *Wat. pl.*

***** *Fert. st. branched; branches whorled, compound, drooping.*

9. **E. sylvaticum.** St. erect; sheaths lax, 3-12-toothed. **P.** 4-5. *Damp wds.*

Order 98.—MARSILEACEÆ.

534. Pilula'ria. Pill-wort.

1. **P. Globulifera.** **P.** 6-7. *Damp pl.*

535. Isoe'tes. Quill-wort.

1. **I. lacustris.** Submersed L. between terete and quadrangular; large spores roughly mealy. **P.** 5-6. *Alp. lakes.*
2. **I. echinospora.** Submersed; L. between terete and quadrangular; large spores prickly. **P.** 5-6. *Alp. lakes.*
3. **I. Hystrix.** Terrestrial; L. filiform. **P.** 5-6. *Ch. Is.*!

Order 99.—LYCOPODIACEÆ.

536. Lycopo'dium. Club Moss.

* *St. erect (base slightly decumbent); fr. axillar, solitary.*

1. **L. Selago.** St. forked; L. rigid, linear-lanc., loosely tiled in about 8 rows. **P.** 6-8. *Mtn. hea.*

** *St. prostrate or decumbent; fr. in (usually) twin. sometimes single spikes, at the top of an erect, nearly naked stalk.*

2. **L. clavatum.** L. hair-tipped; st. long. **P.** 7-8. *Hea.*

*** *St. prostrate; branches ascending, simple.*

3. **L. Selaginoides.** L. scattered, lanc., ciliate-serrate. **P.** 7-8. *Mtn. hea.*
4. **L. inundatum.** L. crowded, narrow-linear, nearly entire, all pointing upwards. **P.** 6-7. *Wet hea.*

**** *St. prostrate; branches ascending, forked.*

5. **L. alpinum.** Branches tufted; L. oblong, acute, closely tiled in 4 rows. **P.** 8. *Mtns.*
6. **L. annotinum.** L. scattered, linear, serrulate, very acute, more crowded and longer in some parts of st., so as to give an interrupted appearance. **P.** 6-8. *Mtns.*

Order 100.—FILICES.

537. Ophioglos'sum. Adder's Tongue.

1. **O. vulgatum.** Frond ov., obtuse. **P.** 5. *Moist past.*

2. O. lusitanicum. Frond linear-lanc. P. 1-2. *Ch., Is.*!

538. BOTRYCH'IUM. Moon-wort.

1. B. Lunaria. Lts. somewhat reniform. P. 6-7. *Past.*
2. B. rutaceum. Lts. linear, serrate-toothed. P. 8. *Sco. Sand. Co.*!

539. OSMUN'DA. Royal Fern.

1. O. regalis. Frond erect, 1-10 ft. high; lts. oblong-ov. P. 6-7. *Bogs.*

540. TRICHOM'ANES. Bristle Fern.

1. T. radicans. Frond dark green, thin, bi-tripinnatifid, on a long stalk. P. 9-10. *Wet rocks, Irel.*!

541. HYMENOPHYL'LUM. Filmy Fern.

1. H. Tunbridgense. Indusium serrate; frond pinnate, very thin; rachis winged. P. 6-7. *Wet rocks.*
2. H. Wilsoni. Indusium entire; frond pinnate; lts. recurved; rachis slightly margined. P. 6-7. *Wet rocks.*

542. CET'ERACH. Scaly Fern.

1. C. officinarum. Frond dark green above. P. 4-10. *Walls and rocks.*

543. PTE'RIS. Brake.

1. P. aquilina. Frond stiff, usually oblique on the st. P. 7-8. *Hea.*

544. ALLOSO'RUS. Parsley Mountain Fern.

1. A. crispus. Outline of frond ov. or roundish triangular. P. 7. *Stony hills.*

545. ADIAN'TUM. Maidenhair.

1. A. capillus-Veneris. Stalk slender, blackish. P. 5-9. *Rocks near sea*!

546. POLYPO'DIUM. Polypody.

* *Frond pinnately divided (not in the least ternate.)*

1. P. vulgare. Frond pinnatifid, segm. oblong. P. 5-10. *Bks. and wds.*
2. P. Phegopteris. Frond pinnate, lts. pinnatifid, hairy on the veins; lowest pair of pinnæ bent downwards. P. 6-8. *Damp pl.*
3. P. alpestre. Frond bipinnate; lts. pinnatifid, thin, oblong-ov., serrate. P. 6-7. *Sco. mtns.*

** *Frond with a broadly triangular outline, ternately bipinnate.*

4. P. Dryopteris. Frond glabrous. P. 7. *Sha. mtn. pl.*
5. P. calcareum. Frond minutely glandular P. 7. *Calc. rocks.*!

547. GYMNOGRAM'MA.

1. G. leptophylla. Frond bi-tripinnate, with an ov. or oblong outline; lts. cuneate, thin. P. 3-4. *Ch. Is.*!

548. WOOD'SIA. Woodsia.

1. W. Ilvensis. Frond oblong-ov.; lts. oblong. P. 6. *Alp. rocks*!
2. W. hyperborea. Frond lanc.; lts. cordate-ov. P. 6. *Alp. rocks.*!

549. POLYS'TICHUM. Shield Fern.

* *Frond simply pinnate.*

1. P. Lonchitis. Frond lanc. or linear, very rigid; lts. lanc.-crescent shaped, with a lobe at the base on one side, serrate. P. 5-6. *Alp. rocks*!

** *Frond bipinnate; or pinnate, and lts. pinnatifid.*

2. P. aculeatum. Outline of frond broadly lanc.; lts. acute, *stalked*, not rigid, mostly lobed on one side at base; lts. nearest to the rachis larger than rest. P. 6. *Sha. pl.*
3. P. lobatum. Outline of frond lanc.; lts. rigid, spinosely toothed, lobed at base, decurrent, few stalked; lts. nearest the rachis longer and larger than rest. P. 6. *Sha. pl.*

350. LASTRÆ'A. Shield Fern.

* *Frond pinnate, lts. pinnatifid (scarcely bipinnate), segm. entire.*

1. L. Oreopteris. Sori round the margin of the segm.; back of frond sprinkled with minute glands. P. 7. *Hea.*
2. L. Thelypteris. Back of frond glabrous; fert. segm. revolute at edge. P. 7. *Bogs.*

** *Frond pinnate; lts. pinnatifid, or bipinnate; segm. toothed or pinnatifid, not awned.*

3. L. cristata. Pinnæ broad, triangular-oblong. P. 6-7. *Bogs.*
4. L. Filix mas. Pinnæ narrow-lanc.; segm. oblong, obtuse, serrate chiefly at end. P. 6-7. *Wds. and sha. pl.*
5. L. rigida. Fronds usually bipinnate, covered with minute stalked glands; pinnules regularly and pinnatifidly lobed; lobes 2-4 toothed. P. 7-8. *Mtns.*

*** *Frond bipinnate or tripinnate; segm. serrate; serratures somewhat awned.*

6. **L. spinulosa.** Lowest pair of pinnæ equal to those above them; sc. of st. pale brown. P. 6-8. *Damp wds. etc.*
7. **L. dilatata.** Lowest pair of pinnæ shorter than those above; sc. of st. pale at edges and dark in the middle. P. 6-8. *Wds.*
8. **L. Fœnisecii.** Frond triangular; lowest pair of pinnæ longest; sc. of st. long and narrow, torn; fruct. crowded on all the pinnæ. P. 8-9. *S. Eng. and Irel.*

551. CYSTOP'TERIS. Bladder Fern.

1. **C. fragilis.** Frond ov.-lanc. in outline, bipinnate, pinnæ ov.-lanc.; lts. pinnatifid. P. 6-7. *Walls and rocks.*
2. **C. alpina.** Frond ov.-lanc. in outline, bipinnate; pinnæ ov., lts. deeply pinnatifid, crowded; segm. linear. P. 7. *Walls!*
3. **C. montana.** Frond broadly triangular in outline, tripinnate. P. 8. *Mtns.!*

552. SCOLOPEN'DRIUM. Hart's Tongue.

1. **S. vulgare.** Frond oblong-lanc., cordate at base. P. 7. *Damp sha. pl.*

553. BLECH'NUM. Hard Fern.

1. **B. boreale.** Bar. frond, lts. oblong-linear, broadest at base, lowest cordate or reniform; fert. frond pectinate. P. 7. *Bogs, hea., and wds.*

554. ASPLE'NIUM. Spleen-wort.

* *Frond pinnate; segm. few, lanc.-cuneate, alt.*

1. **A. germanicum.** Segm. toothed at tip. P. 6-10. *Rocks!*

** *Frond simply pinnate; pinnules many, roundish, ov., or oblong.*

2. **A. Trichomanes.** Lts. roundish or oval, crenate; rachis black. P. 3-10. *Walls and rocks.*
3. **A. viride.** Lts. angularly roundish or ov.-rhomboid, toothed; rachis green. P. 6-7. *Damp rocks!*
4. **A. marinum** Lts. oblong or ov.-oblong, crenate, somewhat auricled on one side at base. P. 7-10. *Rocks near sea.*

*** *Frond bi-tripinnate.*

5. **A. lanceolatum.** Frond lanc. in outline, bipinnate; segm. lobed or toothed; principal rachis not winged in the frond. P. 6-10. *Rocks!*
6. **A. Adiantum nigrum.** Frond triangular or triangular-ov. in outline, bi-tripinnate; segm. toothed; principal rachis somewhat winged in the frond. P. 6-10. *Bks.*

7. **A. Ruta-muraria.** Frond bipinnate; segm. ov.-rhomboid or ov.-cuneate. P. 6-10. *Walls and rocks.*

**** *Frond 2-3 cleft; segm. linear-lanc.*

8. **A. septentrionale.** Segm. 2-fid. at end. P. 6-10. *Rocks!*

555. ATHYR'IUM. Lady Fern.

1. **A. Filix fœmina.** Frond with a lanc. or ov.-lanc. outline, bipinnate; lts. linear-oblong, pinnatifid; segm. toothed. P. 6-7. *Wet sha. pl.*
2. **A. fontanum.** Frond narrow-lanc., bipinnate; lts. cuneate, rounded at base, with acute teeth at end; rachis and branches winged. P. 6. *Walls and rocks.*

GLOSSARY.

Compound words, such as "ovate-lanceolate," mean a form intermediate between the two. Sometimes terms are printed thus—"bi-tripinnate," intending that the leaf is sometimes bipinnate, at other times tripinnate.

ABORTIVE. Applies to a part which usually exists, but in the case under consideration either is absent, or scarcely to be detected.

ACHENE. A 1-seeded carpel not bursting, and resembling a seed. Ex.: Buttercup, Dandelion.

ACICULI. Needle-like prickles, stiffer than bristles.

ACUMINATE. Gradually tapering to a point. (Fig. 13.)

ACUTE. Sharp-pointed at the end. (Fig. 3.)

ADNATE. Growing to, as in stipules. (Fig. 58.)

ADPRESSED. Laid close and flat to the surface.

ÆSTIVATION. The disposition of the petals in the flower-bud just as it bursts.

ALTERNATE. Fixed, first on one side, then on the other, but not opposite to each other.

ANGULAR. With corners, more or less sharp.

ANNULAR. In the form of a ring.

ANTHER. (See introduction, p. 2.)

APICULATE. Terminating in a little point. (Fig. 14.)

APPROXIMATE. Coming near together.

ASCENDING *(stem.)* At first trailing along the ground, then rising erect and forming a curve; *(branches, leaves, etc.)* curving outwards and then upwards.

ATTENUATED. Narrowed, gradually tapering.

AURICLE. An ear-like appendage or leafy enlargement at the base of the leaf or leaf-stalk.

AWN. A stiff bristle on the paleæ or glume of grasses, sometimes at the end of leaves or sepals. The "beard" of barley is an awn. (Fig. 37a.)

AXIL. The angle formed by the junction of the leaf-stalk or leaf and the stem, or of the branches with the stem.

AXILLAR. Springing from the axil.

BARREN *(flower.)* With stamens only: *(filament)* bearing no anther; *(stem)* with leaves only, but no flowers.

BIFID. Cleft into two parts, but not to the base.

BIPINNATE. Doubly pinnate (fig. 22), the leaf pinnately branched, and each branch pinnate with leaflets.

BIPINNATIFID. Doubly pinnatifid.

BITERNATE. Twice ternate.

BRACT. See introduction, p. 3.

BRACTEATED. Furnished with bracts.

CALYX. See introduction, p. 2.

CAMPANULATE. Shaped like a bell.

CAPILLARY. Slender, hair-like.

CAPITATE *(stigma.)* Knobbed and blunt: *(flowers)* clustered into a close head.

CAPSULE. A seed vessel, usually dry, membranous, or horny in texture. Examp.: Poppy, mignionette, violet, &c.

CARPELS. See introduction, p. 2.

CARTILAGINOUS. Gristle-like and tough.

CATKIN. A simple flower stalk tiled with scales or bracts, which enclose flowers, usually without petals or calyx. Examp.: Hazel, willow, birch, &c.

CILIATE. Fringed or bordered with hairs.

CIRCINATE. Unfolding like a bishop's crozier. (Fig. 30.)

CLASPING. When the lower part of the leaf embraces the stem.

CLAWED (*petal.*) Having a more or less broad limb, and a narrower portion (the claw) by which they are fixed at the base. Examp.: Carnation, wallflower, &c. (Fig. 47.)

COHERING. United together.

COLOURED. Of any other colour than green.

COMPOUND (*leaves.*) Made up of many leaflets: (*umbel*) formed of umbellate branches, which in like manner each bear an umbel at their ends. (Fig. 46.)

COMPRESSED. Flattened, as if by pressure.

CONE. Somewhat like a catkin, but with a woody stalk and hard scales. Examp.: Fir.

CONICAL. Shaped somewhat like a sugar-loaf, broad at the base, and tapering towards the top.

CONNATE. When two opposite leaves are united at the base so that the stem appears to pass through them.

CONSOLIDATED. United into a fruit which appears externally as single.

CONTINUOUS. Uninterrupted.

CONVERGING. The ends or points approaching each other.

CONVEX. A surface which rises from all sides towards the centre, and has a curved outline. (Fig. 57.)

CORDATE. Heart-shaped, with the *broadest* part near the point of attachment. (Fig. 1.)

COROLLA. See introduction, p. 2.

CORYMB. A kind of inflorescence in which the peduncles spring at different points from the stem, and the lower are longest, so that the flowers are nearly on a level at top. (Fig. 48.)

CORYMBOSE. Arranged somewhat in the manner of a corymb.

CRENATE. With roundish notches. (Fig. 18.)

CREST. Bordered with a raised edge.

CRISPED. Curled at the edge.

CROWNED (*seed.*) Bordered with a raised edge; (*corolla*) with a ring of teeth round the opening of the corolla-tube, and standing on the petals.

CRUCIFORM. A blossom of 4 petals, arranged so that the limb is in the form of a cross. Ex.: Wallflower. (Fig. 41.)

CUNEATE. Wedge-shaped, the narrow end nearest the point of attachment. (Fig. 25.)

CUSPIDATE. Suddenly contracted into a point. (Fig. 16.) Ex.: Hazel-leaf.

CYME. A kind of inflorescence in which the *central* flower, or the terminal one, opens first, and then the rest in succession outwards or downwards. It may be corymbose, racemed, panicled, or spiked, as regards the disposition of the flowers.

CYMOSE. Having the character of a cyme in regard to the order of flowering.

CYLINDRICAL. Elongated and round like a ruler.

DECIDUOUS. Falling off early; *(leaves)* falling off annually: (*calyx*) falling off either before, or very soon after, the flower opens.

DECUMBENT. Lying on the ground at its base or for some considerable portion of its length, but not so much so as "procumbent."

DECURRENT. When a leafy border, continuous with the blade of the leaf, is carried for a greater or less distance down 2 sides of the stem or stalk.

DEFLEXED. Bent back or downwards.

DELTOID. Triangular in outline. (Fig. 59.)

DENSE. Close-packed, crowded.

DEPRESSED. Having the appearance of being pressed down or flattened from above.

DIADELPHOUS. Stamens having their filaments united into 2 sets, very commonly 9 united and 1 separate.

DIDYNAMOUS. With 2 longer and 2 shorter stamens.

DIGITATE. Fingered; consisting of several leaflets or spikes proceeding from the same point of a common stalk. (Fig. 32.)

DILATED. Enlarged in breadth.

DIŒCIOUS. Flowers bearing stamens growing on one plant exclusively, and pistil-bearing flowers on a distinct plant, yet both of the same species.

DISCOID. Expanding; or arranged in a flattened circular form like a disk.

DISK. A more or less flattened surface; (*in Compositæ*) the flat or convex mass of tubular florets in the centre of the flower (as in the Daisy).

DIVERGING. Departing from the stem, &c., at a considerable angle.

DORSALLY COMPRESSED. Flattened as if by pressure on the back, thus bringing the union or septum into the widest diameter. (Fig. 54.)

DRUPE. A fleshy fruit inclosing a nut or achene, as in plum, Raspberry, etc.

ELLIPTICAL. About the same as "oval," or rather longer; the length greater than the breadth and both ends equally rounded.

ELONGATED. Lengthened out.

ENTIRE. Without divisions; no teeth or notches on the edge.

EQUITANT (vernation). The leaves folded together in, and alternately embracing each other. (Fig. 29.)

EXSERTED. Projecting beyond.

FALCATE. Shaped like the blade of a sickle.

FEATHERED (*pappus*). The rays or bristles fringed with finer hairs.

FEMALE. Containing pistils only, no stamens.

FERTILE. Producing mature fruit. Fertile plants and flowers are those which bear pistils.

FID. Cleft, but not to the base, as 2-*fid*, cleft into 2 parts, 3-*fid*, etc.

FILAMENT. See introduction, p. 2.

FILIFORM. Thread-like.

FISTULAR. Hollow, like a pipe.

FLORET. The several small flowers which make up the head of a composite flower (as the daisy), or the spikelets of grasses or sedges.

FOLLICLE. A carpel opening on one side only, and containing many seeds.

FREE. Unattached, except at the very base.

FRINGED. Bordered with hairs at the *edge*.

FROND. The leaf of ferns, usually bearing the fructification on its back. Also used to express the detached leaf-like plants of Duck-weed.

FUNNEL-SHAPED. An extended limb like an inverted cone, narrowing into a tube below. (Fig. 42.)

GIBBOUS. With an enlargement or swelling at some point.

GLABROUS. Smooth, free from hairs.

GLAND. See introduction, p. 4.

GLAUCOUS. Bluish-green or whitish-green, or with a hoary bloom on the surface.

GLUMACEOUS. Formed by chaff-scales, as in grasses.

GLUME (*in Gramineæ*). A chaff-scale, enclosing the flowers or spikelet of flowers. (Fig. 36 a, a.) The flowers are formed of 2 *paleæ* (fig. 36 b, & fig. 37), enclosing the stamens and pistils; the outer palea is much larger and firmer than the inner, which is delicate and membranous. 1, 2, or more of these flowers are enclosed (at the base) within (usually) a pair of glumes (fig. 36, a,) rarely a single one, and these altogether form a "spikelet." In *Cyperaceæ* the *spikelets* are formed entirely of glumes, each of which encloses a barren or fertile flower, or are sometimes quite empty: in these the cluster of tiled glumes is the spikelet.

GRANULATED. Covered with small raised points.

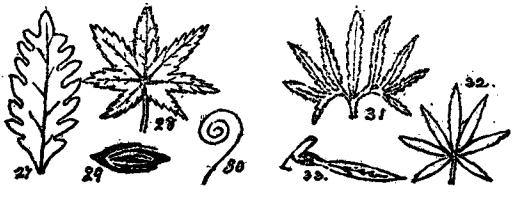
HALBERT-SHAPED. } More or less triangular or hollowed out at
HASTATE. } the base and sides, or with projecting lobes on each side of the base. (Fig. 12.)

HEMISPHERICAL. Half globular, like a split pea.

HERBACEOUS. A plant whose stem usually dies annually and is soft, neither woody nor shrubby.

HERMAPHRODITE. Flowers containing both stamens and pistils.

HILUM. The mark on the seed where the cord was attached by which it was connected with the placenta.



IMBRICATE. Laid close over one another, like tiles on a roof.

INCLUDED. Not projecting beyond.

INCURVED. Bent inwards.

INDEFINITE. A large number, more than 20.

INDUSIUM. The thin membrane which encloses the cluster of fern capsules at the back of the frond.

INFERIOR *(ovary or fruit)*. Fixed *below* the flower, which, therefore, stands upon the top of the ovary.

INFLATED. Swelled as if blown out.

INFLEXED. Bent inwards, or from the point towards the base.

INFLORESCENCE. The arrangement of the flowers.

INTERRUPTED. Separated by a more or less complete gap, or vacant space.

INTERRUPTEDLY-PINNATE. Pinnate, but with a pair of much smaller leaflets between each pair of larger ones.

INVOLUCELLUM. The bracts at the base of an *umbellule*. (Fig. 46, c.)

INVOLUCRE. The bracts at the base of an *umbel* (fig. 46, b.); or the bracts which form the apparent calyx of capitate flowers, such as daisy, scabious, dandelion: or generally, bracts arranged in a circle so as to enclose flowers.

INVOLUTE. Rolled inwards.

IRREGULAR *(corolla or calyx)*. With petals or lobes of unequal size.

KEEL. (1) The lower petal, or rather two conjoined petals, of a papilionaceous blossom. (2) When the mid-rib of a leaf, glume, palea, &c., is sharp, with the blade more or less folded, it is said to be keeled.

LANCEOLATE. Oblong and narrow, tapering towards each end. (Fig. 9.)

LATERAL. At or from the side.

LATERALLY COMPRESSED. Flattened as if by pressure on the sides, so that the line of union or the septum is in the shortest diameter. (Fig. 55.)

LAX. Loosely disposed, not close.

LEAFLET. The small distinct parts of compound leaves.

LENTICULAR. Circular in outline, or nearly so, and somewhat flattened, but doubly convex, like a lens or magnifying glass.

LIGULE. (See introduction, p. 3.)

LIGULATE. Strap-like. (Figs. 10, 60.)

LINEAR. Long and narrow, with the sides nearly parallel, as in grass-leaves.

LIPPED *(flower or calyx)*. The corolla or calyx cleft into two principal portions, one of which is upper, the other lower. (Fig. 40.)

LOBED. Divided, more or less deeply, but not to the base.

LOCULICIDALLY. A mode in which capsules burst; by the wall of the carpel or cell separating in the centre, each part carrying a septum with it. (Fig 53.)

LOMENTACEOUS. A kind of pod which does not split, like the pea or wallflower, but separates transversely into 1-seeded joints.

LONGITUDINALLY. In the direction of the length.

LYRATE. Pinnatifid, but with the terminal lobe larger and roundish. (Fig. 20.)

MALE. Flowers containing stamens only.

MEMBRANOUS. } Thin and skinny, usually white.
MEMBRANACEOUS. }

MONADELPHOUS. Filaments of *all* the stamens more or less united into a tube, or at least at base.

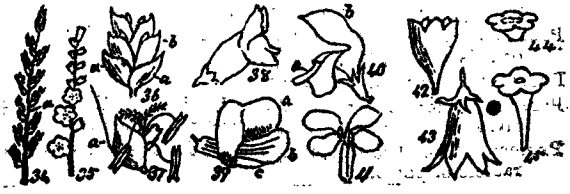
MONŒCIOUS. Having only stamens in some flowers, and pistils only in others, but both kinds of flowers growing on the same individual plant.

MUCRONATE. Abruptly terminated by a small point. (Fig. 15.)

MURICATED. Prickly, or covered more or less entirely with raised points.

NECTARY. A part of a flower which produces a secretion (usually sweet); sometimes a pore or cell at the base of the petal, sometimes a horn or spur, sometimes a stalked gland.

NECTARIFEROUS. Secreting a sweet substance.



NERVED. With veins or marked lines; if much raised from the surface, they are called *ribs*.

NEUTER. Without either stamens or pistils.

OBCORDATE. Cordate, but with the point nearest the place of attachment. (Fig. 2.)

OBLIQUE. Going to one side.

OBLONG. Much longer than broad. (Fig. 7.)

OBOVATE. Egg-shaped, but with the narrower end towards the point of attachment. (Fig. 4.)

OBSOLETE. Hardly or not at all perceptible.

OCHREA. (See introduction, p. 3.)

OPPOSITE. When two branches or leaves originate at the same point of the stem, but on opposite sides.

ORBICULAR. With a circular outline.

OVAL. Longer than its breath, but equally rounded at both ends.

OVARY. (See Introduction, p. 2.)

OVATE. Egg-shaped, with the broader end nearest the point of attachment. (Fig. 3.)

OVOID. Somewhat egg-shaped.

PALEA. Two chaff scales forming the flower of a grass. (See figs. 36, b, and 37, and "Glume.")

PALMATE. Divided about ½ way down into several spreading lobes, but not to the base. (Fig. 28.)

PANICLE. A loose, branched disposition of the inflorescence. (Fig. 49.)

PAPILIONACEOUS. Like a pea-flower: of 4 unequal petals of which the uppermost is called the "*standard*," the 2 side ones "*wings*," and the folded lower one "*keel*." (Fig. 39.)

PAPPUS. Hairs or scales which crown the achenes in Composite plants. (Fig. 60.)

PARASITIC. Living by growing upon and extracting the sap from other plants. Examp., Mistletoe, Dodder, &c.

PARIETAL. When seeds are attached to the *walls* of the capsule or cells. (Fig. 64.)

PECTINATE. Toothed like a comb.

PEDATE. A ternate or quinate leaf, of which the two outer divisions are again parted into several segments. (Fig. 31.)

PEDICEL. The little stalks supporting the separate flowers in a raceme or panicle.

PEDUNCLE. The flower stalk when the flower is solitary, or the main-flower-stalk of a corymb, raceme, panicle, umbel, or spike.

PELLUCID. Very translucent, nearly transparent.

PELTATE. A leaf, orbicular or nearly so in outline, with the petiole not arising from the margin, but from the centre, or some part of the underside.

PENDANT. } Hanging down.
PENDULOUS. }

PERIANTH. The leafy whorl (calyx or corolla), which surrounds the stamens and pistil; most usually employed when there is only a *single* whorl, which would by some be termed *calyx*, by others *corolla*, as in Tulip, Lily, Hyacinth; very commonly used to express the leafy organs of the flower in Monochlamydeæ and Endogens.

PERFECT. (*Flower*) containing both stamens and pistils.

PERFOLIATE. Where the basal lobes of a leaf unite round the stem, so that the stem appears to pass through the leaf. (Fig. 17.)

PERSISTENT. Remaining on; not falling off, even when withered.

PERSONATE. An irregular corolla, of which the lower lip is pressed against the upper, as in Snapdragon. (Fig. 38.)

PETAL. See Introduction, p. 2.

PETALOID. Coloured, and in appearance like a corolla or petal.

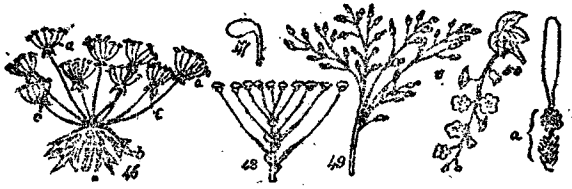
PETIOLE. The leaf-stalk.

PILOSE. Clothed with long, soft, erect hairs.

PINNATE. With one or more pairs of leaflets arranged along opposite sides of a common petiole. (Fig. 21.)

PINNATELY-COMPOUND. Compound in a pinnate manner, as pinnate, bipinnate, tripinnate, etc. Used often where the number of subdivisions is irregular.

PINNATIFID. Cleft in a pinnate manner, but not divided to the midrib. (Fig. 27.)



PINNÆ. The leaflets of a pinnate leaf, or the primary divisions of a bipinnate leaf, etc.

PINNULE. The secondary divisions of a bipinnate or tripinnate leaf.

PLACENTA. The surface to which the seeds are attached in the fruit. (Figs. 64, 65.)

POLYGAMOUS. Plants bearing stamens only in some flowers, and pistils only in others, while others still are hermaphrodite.

PRISM-SHAPED. Somewhat triangular in section and lengthened like a prism.

PROCUMBENT. Lying on the ground throughout most of its length.

PROLIFEROUS. (1) Producing sprouting buds in place of seeds. (2) Producing branches from just beneath the terminal flower or head of flowers.

PROSTRATE. Lying down on the ground through all its length.

QUINATE. With 5 leaflets all united to the petiole at the same point. (Fig. 24.)

RACEME. A form of inflorescence with an unbranched peduncle, bearing several or many flowers loosely disposed and each stalked on its own pedicel. (Fig. 50.)

RACEMOSE. Disposed like a raceme.

RACHIS. (1) That part of the peduncle on which the spikelets of grasses and sedges are arranged. (Fig. 34, a.) (2) The main midrib or petiole of ferns.

RADICAL (*leaves*). Those which spring from the crown of the root.

RADIATE. RADIANT. RAY. In composite, aggregate, umbelliferous and corymbose flowers, where the florets or flowers of the circumference are large and spreading, and different from and more conspicuous than the rest. Examp.: Daisy.

RECEPTACLE. The enlarged end of the peduncle on which florets (in composite flowers) or fruits (as in Buttercup, Strawberry, Raspberry, etc.) are clustered.

RECURVED. Curved backwards.

REFLEXED. Bent backwards or downwards.

REGULAR (*corolla*). The petals or lobes all equal in size and shape.

REMOTE. Distant from one another.

RENIFORM. Kidney-shaped. (Fig. 18.)

RETICULATED. Like network: covered with veins or projecting ribs like network.

REVOLUTE. Rolled back.

RHIZOME, OR ROOT STOCK. A creeping stem, usually underground, and resembling a root, from which buds, leaves, or branches are thrown off.

RHOMBOID. Ovate but pointed, and angular about the middle. (Fig. 23.)

RIGID. Stiff.

RINGENT. Gaping. (Fig. 40.)

ROTATE *(corolla)*. Wheel-shaped, with a flat limb and a very short tube. (Fig. 44.)

RUNCINATE. Pinnatifid, with the terminal lobe triangular, and the lateral lobes pointing backwards. (Fig. 19.)

SAGITTATE. Arrow-shaped; triangular, with the basal lobes prolonged backwards. (Fig. 11.)

SALVER SHAPED. Like a rotate corolla, but with a longer tube. (Fig. 45.)

SCABROUS. Rough from points or projections.

SCAPE. A flower stalk rising from the root, bearing flowers but no leaves. Examp.: Cowslip.

SCATTERED. Situated irregularly and at some distance from each other.

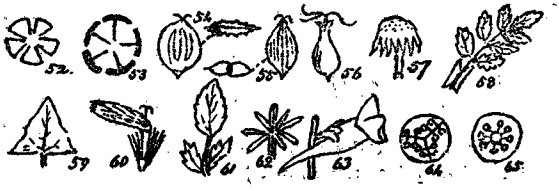
SECUND. All the flowers, etc., pointing to one side.

SEGMENT. A division or lobe not usually extending through.

SEMICYLINDRICAL. ½ cylindrical, like a ruler split down the middle.

SEPAL. (See Introduction, p. 2.)

SEPTICIDAL. A mode in which capsules burst, each cell separating from the next by the septum splitting down the middle. (Fig. 52.)



SEPTUM (plural SEPTA). The partitions dividing a capsule or fruit into cells.

SERRATE. Toothed sharply like a saw, and the teeth pointing forwards. (Figs. 16, 28.)

SERRULATE. Very minutely serrated.

SESSILE. Sitting; having no peduncle, pedicel or petiole.

SETACEOUS. Bristle-like.

SHEATH (in grasses and sedges). The lower part of the leaf wrapping round and enclosing the stem.

SIMPLE. Of one piece; not composed of separate branches or leaflets; it must be distinguished (in leaves or petals) from *entire*, as a leaf, though *simple*, may nevertheless be notched or toothed on the edge.

SINUATE. Lobed in a manner resembling the oak-leaf, with no sharp divisions, but the outline bends in and out.

SOLITARY. Only one flower, etc., arising from the same axil or plant.

SORI (plural). SORUS (singular). The patches of fructification on the back of the fronds of ferns; they are composed of clusters of sporangia or spore-capsules.

SPADIX. A more or less fleshy peduncle supporting very numerous flowers arranged in a spiked or whorled form, and densely crowded: sometimes enclosed by a spathe. (Fig. 51 a.)

SPATHE. (See introduction, p. 8.)

SPATHULATE. With a broad, rounded end, but tapering towards the stalk. (Fig. 8.)

SPIKE. A form of inflorescence consisting of numerous *sessile* flowers arranged on a long peduncle. (Figs. 34, 35.) Sometimes when the flowers are densely *crowded on* a peduncle, even though somewhat stalked, they are said to be spiked.

SPIKELET. (Fig. 36.) And see also definition of "Glume."

SPORE. The germinating cell or seed of Acrogens.

SPUR. A horn-shaped projection from some part of the corolla or calyx. (Fig. 68.)

SPREADING. Diverging—the opposite of close, compact, or adpressed.

STANDARD. The (usually large) upper petal of a papilionaceous corolla. (Fig. 39 a.)

STELLATE. Branched like the rays of a star.

STEMLESS. Without any distinct stem, the leaves all clustering on the crown of the root.

STIGMA. (See introduction, p. 2.)

STIPITATE. Stalked; usually applied to the pappus of certain composite plants, which is supported at the end of the long beak of an achene. Examp.: Dandelion.

STIPULE. (See introduction, p. 2.)

STRAP-SHAPED. Long, narrow, and flat, with parallel sides. (Fig. 10.)

STRIATED. STRIÆ. Marked with small parallel grooves or furrows, as if scratched; fine marks of this kind are called *striæ*; deeper and coarser ones, *grooves* or *furrows*; if single, *channelled*.

STROBILUS. A cone, having only membranous scales, like the fruit of the hop.

STYLE. (See introduction, p. 2.)

SUBULATE. Awl-shaped; long, narrow, and tapering to a point; somewhat stouter than *setaceous*.

SUBMERSED. Under water.

SUPERIOR (*ovary*). When the ovary is *within* the flower, not *under* it, and therefore fixed above the petals and calyx.

TENDRIL. (See the introduction, p. 2.)

TERETE. Cylindrical, and circular in section.

TERMINAL. At the end of the stem, etc.

TERNATE. A leaf with 3 leaflets like Trefoil.

TERNATELY COMPOUND. Compound in threes: as with three branches, each branch with three leaflets, or pinnæ, etc.

THORN. (See introduction, p. 4.) Also applied to a similar character of the midrib or principal veins of a leaf.

THYRSE. A close panicle of an oval form, the middle branches of which are the longest.

TOOTHED. Notched at the edge with blunt or bluntish divisions.

TRANSVERSELY. In the direction of the breadth.

TRIFID. Three cleft, more or less deeply.

TRIGONOUS. Three cornered, but with blunt angles and convex faces to the sides of the stem, etc.

TRIPARTITE. Three cleft, more or less deeply.

TRIPINNATE. Three times pinnate, the midrib pinnately branched, the branches pinnately branched again, and these last furnished with leaflets pinnately arranged.

TRIPINNATIFID. Three times pinnatifid.

TRIQUETROUS. Sharply three angled.

TRITERNATE. Three times ternate; see *Ternate*.

TRUNCATE. Blunt as if cut off. (Fig. 25.)

TUBERCLED. Furnished with small hard fleshy grains. In tubercled achenes or fruits, these usually cover the surface.

TUNIC. A flask-shaped loose coat, covering the achene of sedges. (Fig. 56.)

TURBINATE. Shaped like a peg-top or pear.

TWIN. Two together, usually united all or part of the way up.

UMBEL. A branched form of inflorescence, in which the branches originate all at the same point and from a somewhat level top. (Fig. 46.) If a single flower terminates each branch, it is a *simple* umbel; if an umbellule, it is a *compound* umbel. (Fig. 46).

UMBELLATE. Branched in an umbel-like manner.

UMBELLULE. A small umbel, terminating each branch of a larger umbel. (Fig. 46 a.)

UNEQUAL. The parts not all of the same size, or the two sides of a leaf, etc., not of the same size.

UNILATERAL. All on one side, or pointing to one side.

VALVATE. Opening like valves, i.e., touching one another at the edges, but *not overlapping*.

VEINS. The lines in a leaf, petal, etc., which indicate the vessels of the leaf, etc. If these project much from the surface they are called ribs.

VERNATION. The mode in which leaves unfold from their bud.

VERTICAL. Perpendicular.

VISCID. Clammy, sticky.

WHEEL-SHAPED. Same as rotate. (Fig. 44.)

WHORL. Several flowers, leaves, etc., arranged in a ring around the stem at one point. (Fig. 62.)

WING. (1) The two side petals of a papilionaceous flower or of the flower of Fumariaceæ. (2) (Of a *seed*) a membranous border of greater or less width standing out from the edge and often greatly exceeding the seed in breadth. Examp.: Ash, Elm.

WINGED (1) SEED. See *Wing*. (2) STEM. with a raised leafy border on each side or angle of the stem.

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